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Foreword

This report presents the principal findings of the third Forest Survey of Arkansas, made in 1958-59 by the Southern Forest Experiment Station. Philip R. Wheeler, Chief of the Station's Division of Forest Economics, was in charge.

The survey, which was undertaken as one phase of the nationwide inventory being conducted by the U. S. Forest Service, was designed to provide up-to-date information on the kind, amount, and condition of forest resources; the industries they support; and the possibilities for improving wood production. Comparison with the inventory that was completed in 1951 helps to clarify timber trends.

Generous assistance from public and private organizations made it possible to keep the field work for the new inventory ahead of the schedule that could have been maintained with regularly allotted funds. The very material aid of the organizations listed below, and of the individuals in them, is gratefully acknowledged:

Arkansas Forestry Commission

The Crossett Company

International Paper Company

Dierks Forests, Inc.

Bradley-Southern Division of Potlatch Forests, Inc.

Fordyce Lumber Company

Ozan Lumber Company

Deltic Farm and Timber Company

Pomeroy and McGowin

ARKANSAS FORESTS

Herbert S. Sternitzke

U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

SOUTHERN FOREST EXPERIMENT STATION
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1960

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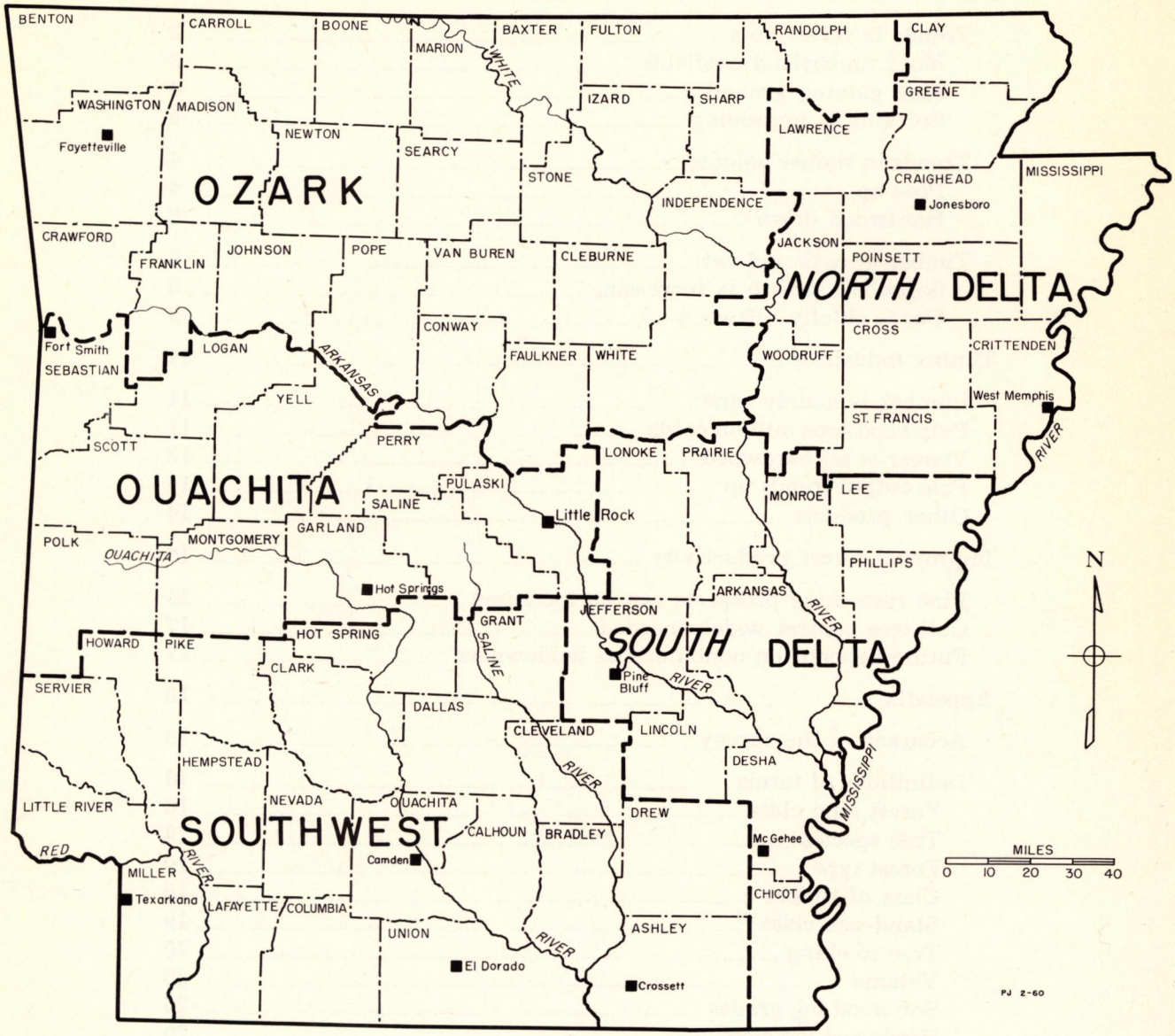


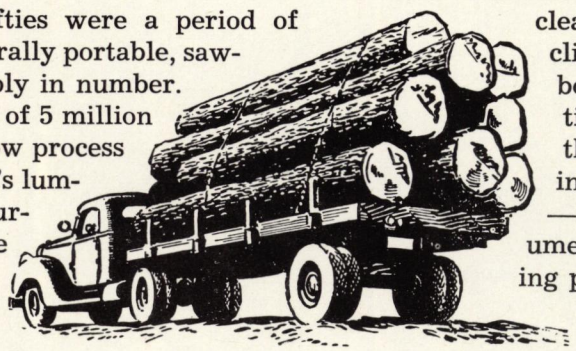
Figure 1. *Forest Survey regions in Arkansas.*

Timber And Industry In Arkansas Since The Midcentury

Arkansas' forest situation changed markedly during the past decade.

The pulp and paper industry greatly increased its capabilities. Two new multi-million dollar mills were established at Pine Bluff, and existing plants at Camden and Crossett were enlarged (fig. 1). In response to industrial expansion, the total output of pulpwood increased more than twofold—from 604,000 cords in 1950 to 1,524,000 cords in 1959. Additional expansion of the industry within the State and in peripheral areas promises to boost pulpwood production—both pine and hardwood—to new records in the 1960's.

For lumber, the fifties were a period of transition. Small, generally portable, sawmills diminished sharply in number. Mills cutting in excess of 5 million board feet annually now process two-thirds of the State's lumber. Such mills may further enlarge their share of the output in the decade ahead.



The lumber industry also developed a new and profitable market for plant residues that were formerly regarded as unavoidable waste. Today over 50 Arkansas sawmills convert slabs and edgings, chiefly pine, into high-quality chips for sale to pulp mills. The equivalent of one in every four cords of pine pulpwood produced in Arkansas is currently derived from chips. Production of chips is expected to continue to increase in the sixties.

Arkansas' veneer industry, which consumes mainly soft-textured hardwoods, dropped to 11 active plants in 1958, as compared to 18 ten years earlier.

With construction of 6 new establishments, pressure-treating plants doubled in number. Paralleling the wood-preserving industry's expansion, production of southern pine poles and piling trended upward.

What happened to the forests during the fifties?

In area, the forests are 7 percent or some 1.4 million acres greater than in 1951. The latest survey shows that they now encompass 62 percent of Arkansas' total land area.

In volume, softwood growing stock (mainly pine) has increased nearly a third, softwood sawtimber has gained 41 percent. These are reversals of earlier trends. While pine increased in the fifties, hardwood inventory diminished 9 percent; the volume of hardwood large enough for sawtimber dropped 19 percent. Excessive cutting and localized land clearing contributed to the decline of hardwood timber in the bottom-lands. In the uplands, timber stand improvement — that is, noncommercial deadening of unwanted hardwood stems —helped to reduce hardwood volume on areas better suited to growing pine.

Recent forestry gains in Arkansas have largely taken place on public and industrially owned tracts. Together these holdings make up about 7 million acres. Almost 14 million of the 20.8 million forest acres in the State are held by farmers and other private owners not directly connected with wood-using industries. On these holdings especially, there are numerous opportunities for increasing future supplies of timber that can support new industries. Productivity can be substantially improved by restoring pines to several million forest acres where natural seeding appears unlikely; by providing adequate growing space for thrifty timber through cull-tree removal; and, particularly on areas capable of growing industrial hardwood, by cutting practices that will permit a build-up in trees of large size and desirable species.

Forest Land And Timber

TRENDS IN FOREST AREA

More Timberland Available

Land available and suitable for timber production in Arkansas increased by 1.4 million acres during the past decade. Forests now occupy 62 percent, 20.8 million acres, of the State's total land area.

The change in forest area has followed a well-defined pattern. In upland regions, forests have expanded partly as pines have been planted on old fields and partly as abandoned farm land has reverted to forest. This trend is typical of Midsouth States generally. In fact, forest area in the uplands has steadily gained in the Midsouth since at least the middle 1930's, when the first regional timber survey was carried out. At the same time, in the lower Mississippi River Valley—or Delta—clearing and drainage have continued to shrink forest area. In the Arkansas portion of the Delta, for example, commercial forest land decreased 19 percent (838,700 acres) between 1935 and 1950, and has since declined another 7 percent (248,200 acres). Clearing of new land in this fertile alluvial area, however, has been greatly overshadowed by the pronounced increases in forest area outside of the Delta. Overall, present forest area in Arkansas is 7 percent greater than in 1951, when the previous forest inventory was completed.

What about future trends in forest area? Long-range regional studies [1] suggest that expansion of agricultural acreage is probable for areas encompassing Arkansas. If projected increases are realized, the upward trend of forest acreage in Arkansas may be reversed within the next 15 to 20 years.

Pine Gaining Ground

A second trend evident in Arkansas is the expansion of softwood types in the uplands. Fifty-four percent of the forested upland acreage is in such cover; in 1951 it was 50 percent. Hardwood types of low quality and value are no longer gaining at the expense of softwoods.

The gain in softwood types amounts to almost 1.3 million acres, of which more than 550 thousand acres are in the southwestern region. Here good pine land prevails, the average site index being about 80 feet at age 50. Such sites can grow 500 or more board feet per acre annually, or an equivalent cubic volume of pulpwood, poles, or piling. To the pulp and paper industry, whose use of pine is steadily rising, the expansion of pine area in the southwest represents an especially favorable situation. Given essential fire protection, the added forest acreage will augment the supply of pulpwood-size trees within the next decade or so.

Pine of course is not necessarily a stand component everywhere that softwood types have increased. In the Ozark Highlands, for example, softwood area has risen some 61 percent. Of this, nearly half (289,400 acres) is in the redcedar type. In the northern Ozarks especially, cedar is usually one of the first species to seed-in on old fields. But from the Boston Mountains southward, its occurrence is limited.

Despite the reduction of forest area in the Delta, total acreage of bottom-land hardwoods has not changed appreciably since the previous survey (table 1). On the alluvium west of the Delta, farm land is reverting to forest faster than it is being cleared. The explanation

[1] Wooten, H. H., and Anderson, J. R. **Agricultural land resources in the United States.** U. S. Dept. Agr. Agr. Inform. Bul. 140, 107 pp., illus. 1955. Also see **Water resources activities in the United States.** U. S. Senate Select Committee on National Water Resources, Committee Print 13, 24 pp., illus. 86th Cong., 2nd Sess.

Table 1. *Commercial forest land by forest type (1959) and change since 1951*

Region	All types	Change	Softwood [1]	Change	Oak-hickory	Change	Bottom-land hardwood [2]	Change
	Thd. acres	*Percent*	*Thd. acres*	*Percent*	*Thd. acres*	*Percent*	*Thd. acres*	*Percent*
Southwest	6,959.7	+10	4,508.6	+14	982.2	− 9	1,468.9	+13
Ouachita	3,552.2	+ 5	2,518.1	+ 5	841.0	+ 4	193.1	+12
Ozark	6,995.9	+14	1,592.5	+61	5,100.6	+ 6	302.8	− 6
Delta	3,249.2	− 7	158.6	+ 7	600.4	−20	2,490.2	− 4
Total	20,757.0	+ 7	8,777.8	+17	7,524.2	+ 1	4,455.0	+ 1

[1] Includes loblolly-shortleaf pine, oak-pine, and cedar types.
[2] Includes oak-gum-cypress and elm-ash-cottonwood types.

is perhaps that these generally smaller bottoms are not so well suited to mechanized agriculture as is the Delta. Some 44 percent of the Statewide acreage of bottom-land hardwood forests is presently outside of the Delta. In view of anticipated development of agricultural land within the Delta, this proportion may rise. Non-Delta bottom-land hardwoods are often strung along the smaller streams rather than in continuous tracts (fig. 2). Generally speaking, the per-acre cost of managing such stands tends to be relatively high.

Stocking Is Improving

Stocking of Arkansas timber stands has improved discernibly since 1951. At that time, about half the forest area was well stocked in the sense that it had at least 70 percent of the number of sound, well-formed trees of any size or combination of sizes needed for full stocking. Today two-thirds is well stocked. The increase amounts to some 4 million acres. The change is largely attributable to improved fire protection. On areas supporting pine, which generally receive the most intensive protection, stocking in small trees is noticeably fuller than in hardwood timber types.

The trend toward heavier stocking is apparently quite general over the State. But improvement is most noteworthy in the Ozarks. The sparse stands that formerly typified this region have been gradually filling in with young trees. As a result, the well-stocked area has doubled.

Contributing to the deficiency of stocking in some areas is an accumulation of outright culls, mainly hardwoods. These trees occupy growing space that might better be used by thrifty, merchantable timber or by seedlings. Although considerable effort is being devoted to cull-tree removal, especially in softwood types, culls still make up about one-fourth of the basal area in trees over 5.0 inches in diameter.

TRENDS IN TIMBER VOLUME

Pine Up

Softwood volume in Arkansas, virtually all loblolly and shortleaf pine, now is 5.4 billion cubic feet—up 31 percent since 1951 (table 2; fig. 3). This gain, a reversal of earlier trends, is largely associated with ownerships that have long displayed a strong and active interest in forest management.

Table 2. *Growing stock volume (1959) and change since 1951*

Region	Softwood		Hardwood	
	Volume	Change	Volume	Change
	Million cu. ft.	*Percent*	*Million cu. ft.*	*Percent*
Southwest	3,384.4	+30	2,353.7	− 8
Ouachita	1,522.6	+39	619.8	−16
Ozark	338.6	+17	1,820.9	+ 3
Delta	171.5	+17	1,819.7	−17
Total	5,417.1	+31	6,614.1	− 9

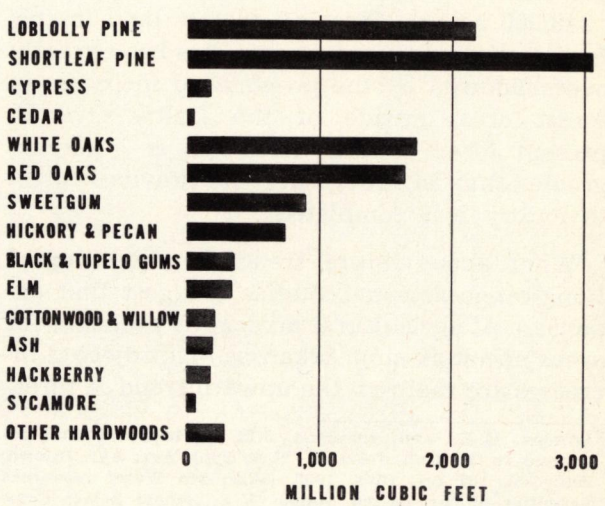


Figure 3. *Growing stock by species.*

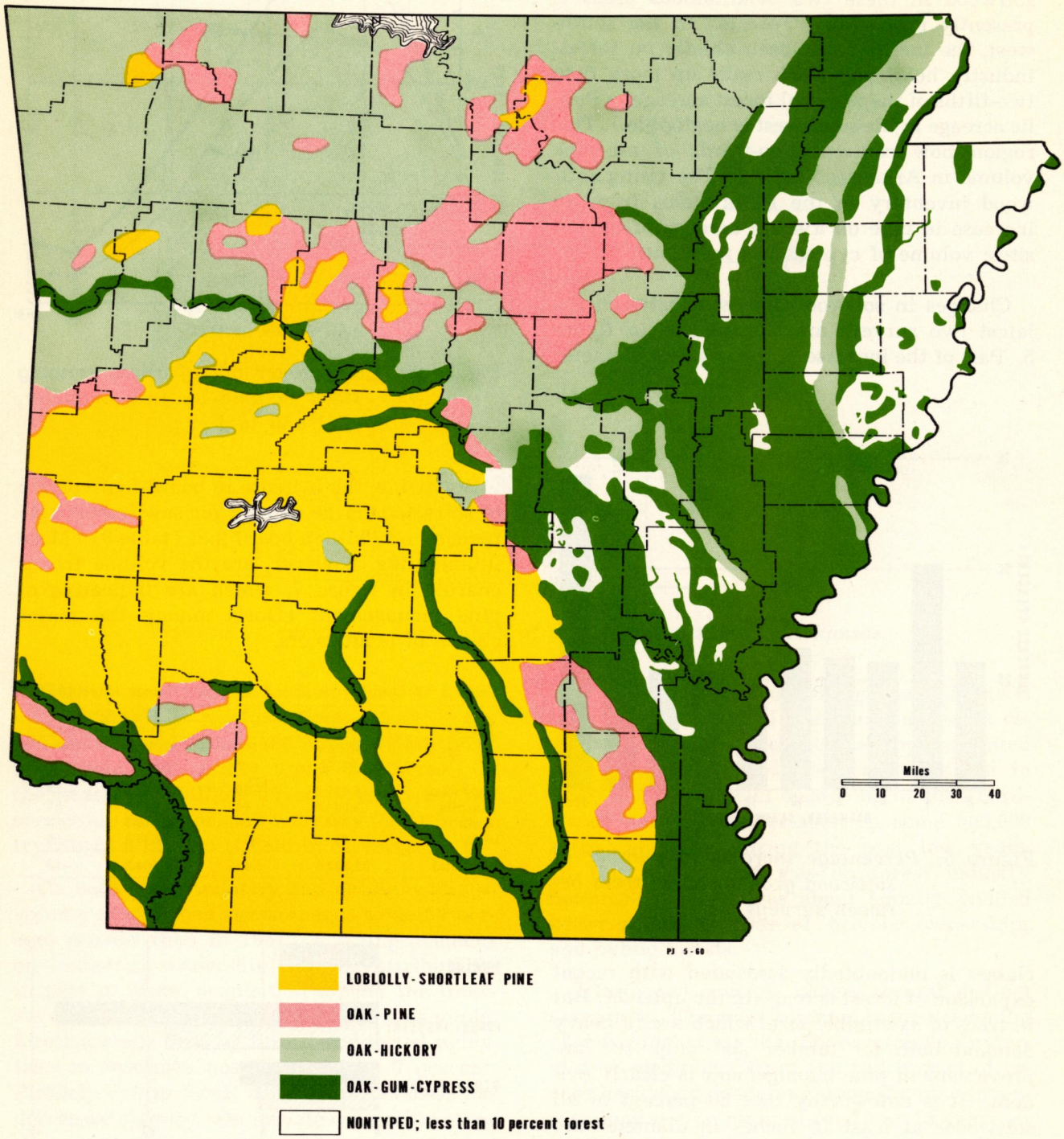


Figure 2. *Major forest types in Arkansas.*

In both the Ouachita and Ozark regions, for example, the softwood accretion has mainly taken place on public lands. Half of the softwood in these two mountainous areas is presently in National Forests. In the southwest, the increase has been chiefly on forest-industry holdings, which make up more than two-fifths of the regional forest acreage. (Public acreage in the southwest is negligible.) This region now contains two-thirds of all pine volume in Arkansas (fig. 4). The rising softwood inventory in the Delta stems from an increase in pine on a small acreage of upland sites; volume of cypress has fallen off.

Changes in softwood tree size between the latest two surveys are summarized in figure 5. Part of the increase in the smallest diameter

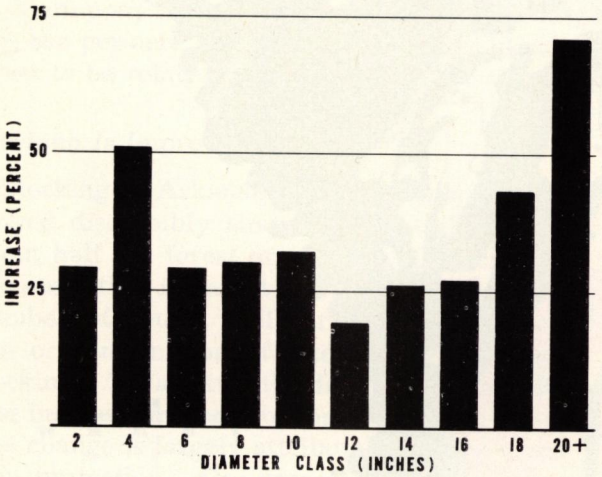


Figure 5. *Percentage increase in number of softwood growing stock trees between surveys.*

classes is undoubtedly associated with recent expansion of forest acreage in the uplands. But in trees of sawtimber size, which are in heavy demand both for lumber and pulp, the improvement in pine management is clearly evident. It is noteworthy that 80 percent of all softwoods at least 16 inches in diameter are growing on the 7 million forest acres held by timber industries and public agencies. As a result of changes in stand structure, softwood volume increased some 1.3 billion cubic feet, nearly half in trees 16 inches and larger in diameter (fig. 6).

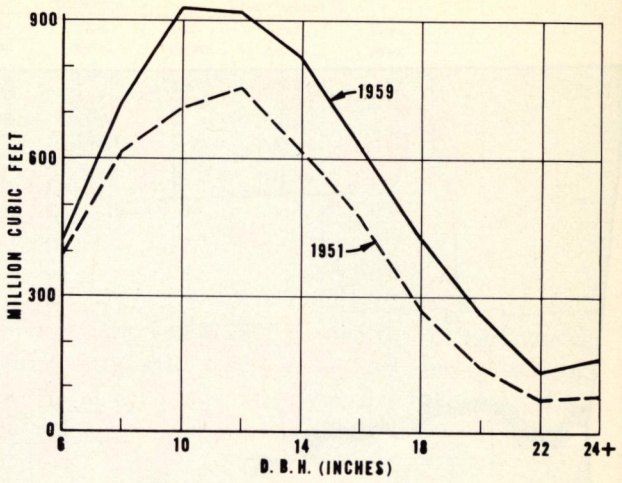


Figure 6. *Comparison of softwood growing stock volume by tree diameter, 1951 and 1959.*

Statewide, the increase in board-foot volume of softwoods large enough for sawtimber is 41 percent, or 7 billion board feet (table 3). More illuminating, however, are the volume trends charted in figure 7, which are indicative of pine management efforts among the major classes of landowners.

Table 3. *Sawtimber volume (1959) and change since 1951*

Region	Softwood		Hardwood	
	Volume	Change	Volume	Change
	Million bd. ft.	*Percent*	*Million bd. ft.*	*Percent*
Southwest	16,359.6	+39	5,773.1	−19
Ouachita	5,851.6	+44	1,214.0	−37
Ozark	1,237.7	+64	4,270.3	−13
Delta	834.7	+25	5,636.8	−16
Total	24,283.6	+41	16,894.2	−19

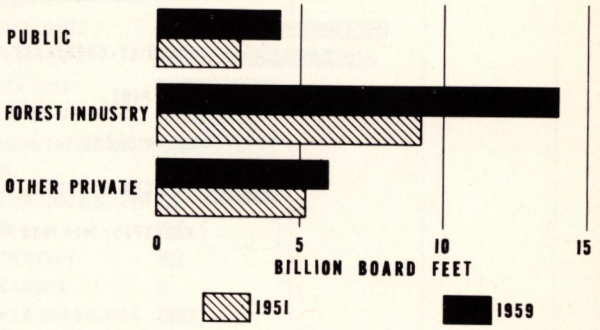


Figure 7. *Comparison of softwood sawtimber volume by class of ownership, 1951 and 1959.*

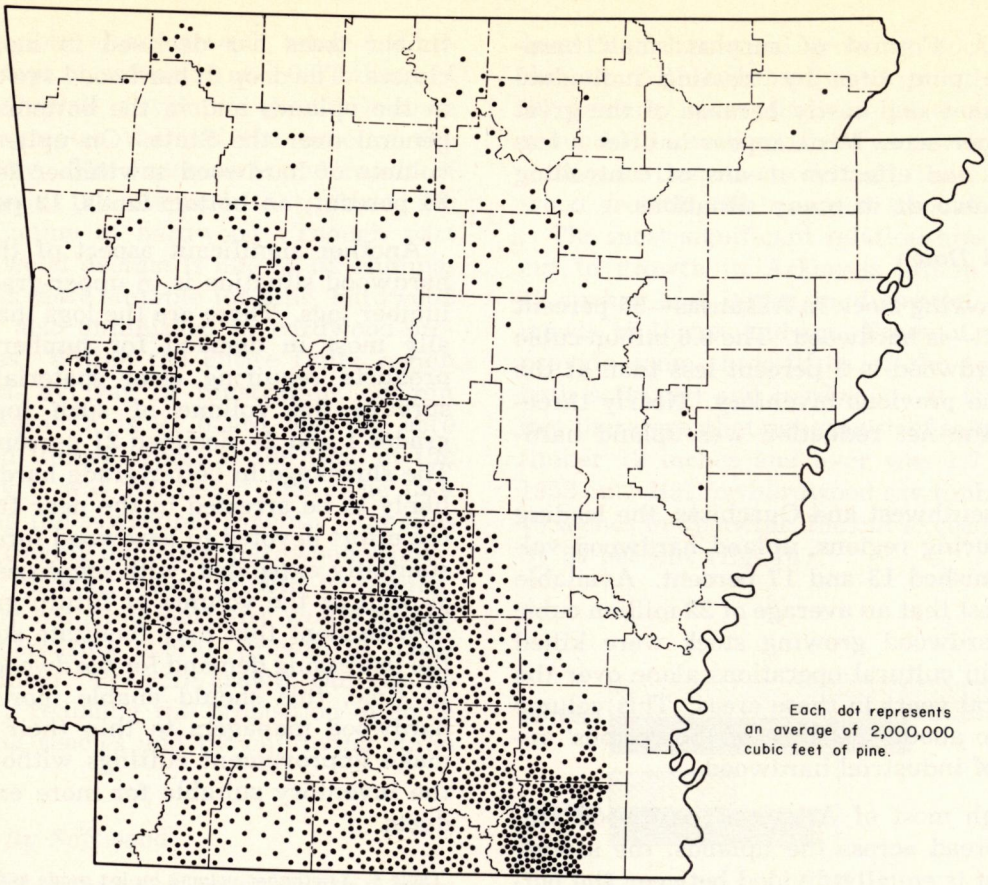


Figure 4. *Generalized distribution of pine growing stock in Arkansas.*

Slightly less than 3 million acres of commercial forest is publicly held. Most of the privately owned forest land is in comparatively small holdings—chiefly under 500 acres. Of the nearly 14 million forest acres in private ownership not associated with any forest industry, about 6 million is held by farmers.

On both forest-industry and public holdings, volume of softwood sawtimber is some 50 percent greater than in 1951. The improvement on industrial ownership may be attributable in part to forest acquisition during the inter-survey period. Outside the Delta, for example, forest acreage held by timber-connected industries in Arkansas has increased by 7 percent. Publicly owned forest acreage in Arkansas has decreased slightly. On private ownership other than that held by industry, the gain in softwood sawtimber has been about 16 percent. Although forest acreage in the latter ownership has risen some 10 percent during the past decade, the added area is essentially the result of reversion to forest of old fields.

Another yardstick of management efforts is the extent of cultural operations aimed at reducing growing space occupied by unwanted hardwoods on upland areas better suited to pine. Noncommercial deadening of such hardwoods has been undertaken on some 500,000 acres[2] annually during the past few years. Of this, about half was on forest industry holdings; the rest was about equally divided between other types of private ownerships and public forests.

"Hardwood control" covers several distinct operations. The most common is the deadening of individual stems that are overtopping natural pine seedlings. Thus, the full impact of recent hardwood deadening upon the pine inventory may not be realized for 10 or 15 years, or until many of the newly released seedlings have attained growing-stock size. The latest control practice is the use of mechanical blowers to apply silvicidal mists to small unwanted

[2] Does not include acreage on which this work was limited exclusively to trees under 5.0 inches in d.b.h.

hardwoods. Control of surplus small hardwoods on pine sites by treating individual stems is slow and costly because of the great numbers per acre. Mists appear to offer a less expensive and effective means of controlling small hardwoods in many situations.

Hardwood Down

Most growing stock in Arkansas—55 percent of the total—is hardwood. The 6.6 billion cubic feet of hardwood is 9 percent less than at the time of the previous inventory. Nearly three-fifths of the net reduction was upland hardwood.

In the southwest and Ouachitas, the leading pine-producing regions, upland hardwood volume diminished 13 and 17 percent. Available data suggest that an average of 22 million cubic feet of hardwood growing stock were killed annually in cultural operations alone over the past several years in these areas. This volume is equal to about one-third of the regions' annual cut of industrial hardwood.

Although most of Arkansas' hardwood volume is spread across the uplands, the sawlog component is equally divided between the bottom-lands and uplands. It will be noted from figure 8 that the number of hardwood sawtimber trees has declined in most diameter classes. The drop in hardwood sawtimber, both in the uplands and in the bottoms, was quite general over the State. On upland soils, the volume of hardwood sawtimber fell off some 24 percent; on bottom-lands, 12 percent.

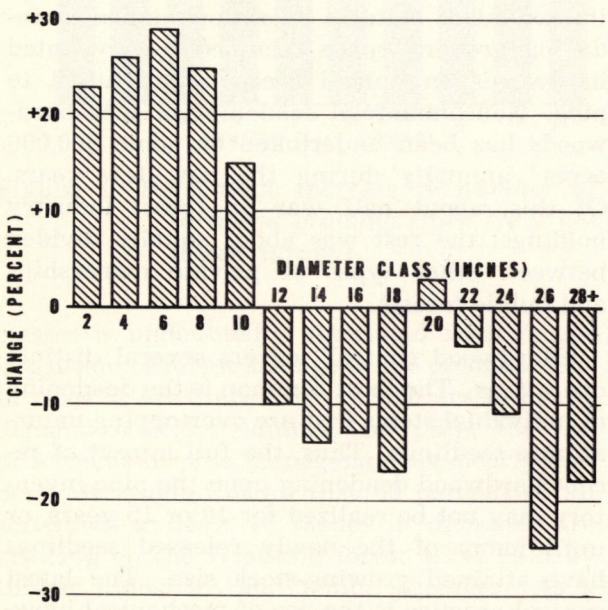


Figure 8. *Percentage change in number of hardwood growing stock trees between surveys.*

Another significant aspect of the changing hardwood situation is in upper-grade standard lumber logs. These are the logs that are normally most in demand for lumber and other products requiring clear material. Between surveys the volume of such logs—that is, grades 1 and 2—declined 21 percent (table 4). The shrinkage in better-grade hardwood is not likely to be arrested in the near future unless the effort devoted to hardwood forestry is substantially expanded, with emphasis on quality as well as the volume of future growth. One development that may facilitate such effort is the increasing demand for hardwood pulpwood. In time, this should enable more and more hardwood managers to thin their stands and make improvement cuttings without reducing the inventory suitable for more exacting products.

Table 4. *Sawtimber volume by log grade and tree diameter, 1959*

Species group and d.b.h. class (inches)	All grades	Grade 1 [1]	Grade 2	Lower grades
		Million board feet		
Softwood:				
10 to 12	9,442.0	35.0	256.6	9,150.4
14 to 18	11,238.8	37.6	2,819.5	8,381.7
20 and up	3,602.8	596.1	766.4	2,240.3
Total	24,283.6	668.7	3,842.5	19,772.4
Hardwood:				
12	3,790.1	...	31.8	3,758.3
14 to 18	8,571.9	232.8	1,841.1	6,498.0
20 and up	4,532.2	879.0	1,206.7	2,446.5
Total	16,894.2	1,111.8	3,079.6	12,702.8

[1] All cedar sawlogs were graded as No. 1.

TIMBER GROWTH AND CUT

Softwood Growth Is Increasing

Forest fires, insect pests, tree diseases, and other natural causes kill about 92 million cubic feet of Arkansas timber annually. The loss is equivalent to 14 percent of the net growth of growing stock, and is much higher in hardwoods than in softwoods. After allowance is made for mortality, net annual growth amounts to 340 million cubic feet of softwood growing stock and 297 million of hardwood. This equals 31 cubic feet per acre a year, or about 0.4 cord.

For sawtimber alone, growth totals 1.6 billion board feet of softwood and 0.8 billion of hardwood. Overall, sawtimber growth is some 10 percent greater than at the time of the earlier survey. The increase is the result of a sizable gain in softwood that offset the growth reduction of hardwood. Though part of the hardwood decline is due to its elimination on areas more suitable for pine, hardwood growth has also diminished in hardwood-producing areas. Within the entire Delta region of Arkansas, by way of illustration, current annual net growth is 91 board feet per acre in hardwood timber types; at the time of the prior survey it was 120 board feet. The task of rebuilding the sawtimber inventory on sites capable of growing industrial hardwood is obviously more difficult when growth is waning. Substantially reducing mortality would be one means of increasing overall growth of hardwood sawtimber. Per-acre growth can also be increased by reducing the proportion of some slow-growing species and by improving stand structure.

Cut Is Chiefly Softwood

In 1958, when the most recent statistics were compiled, 193 million cubic feet of softwood and 185 million of hardwood were cut in Arkansas. The estimate of hardwood cut includes 24 million cubic feet killed in cultural operations. Nearly all of the softwood cut was pine. Oak made up 75 percent of the hardwood, other firm-textured hardwoods accounted for 11 percent, and soft-textured hardwoods, mainly sweetgum, for the remaining 14 percent.

It will be noted in figure 9 that in 1958 the growth of hardwood growing stock exceeded the cut. Although hardwood growth was some 20 percent lower than 10 years earlier, the reduction in hardwood cut was even more pronounced. Despite its decline, therefore, hardwood growth still exceeded the cut.

The most significant relationships of timber cut to growth in Arkansas are in softwoods 12 inches and larger in diameter, and hardwoods 16 inches and up. Trees of these sizes provide some three-fifths of the total cut of both softwood and hardwood. It is encouraging, therefore, that net growth of softwood sawtimber 12 inches and over was 1.7 times the 1958 cut. But for hardwood sawtimber at least 16 inches in diameter, the cut exceeded growth by 69 percent (fig. 10).

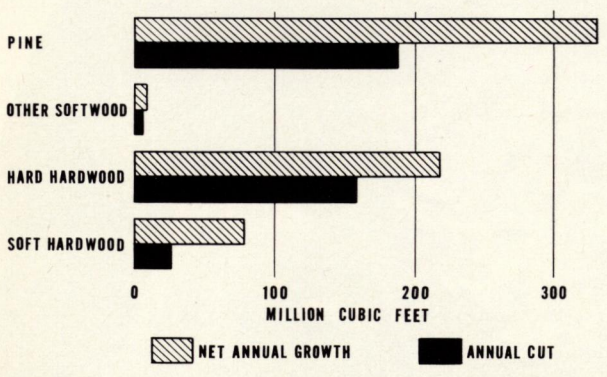


Figure 9. *Growth and cut of growing stock, 1958.*

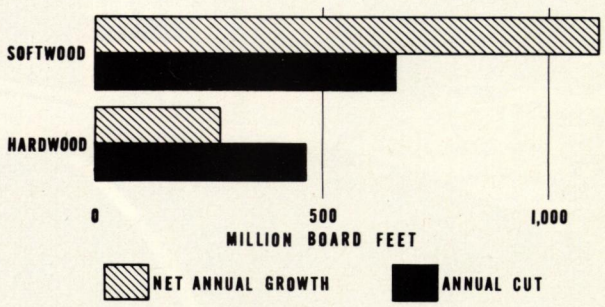
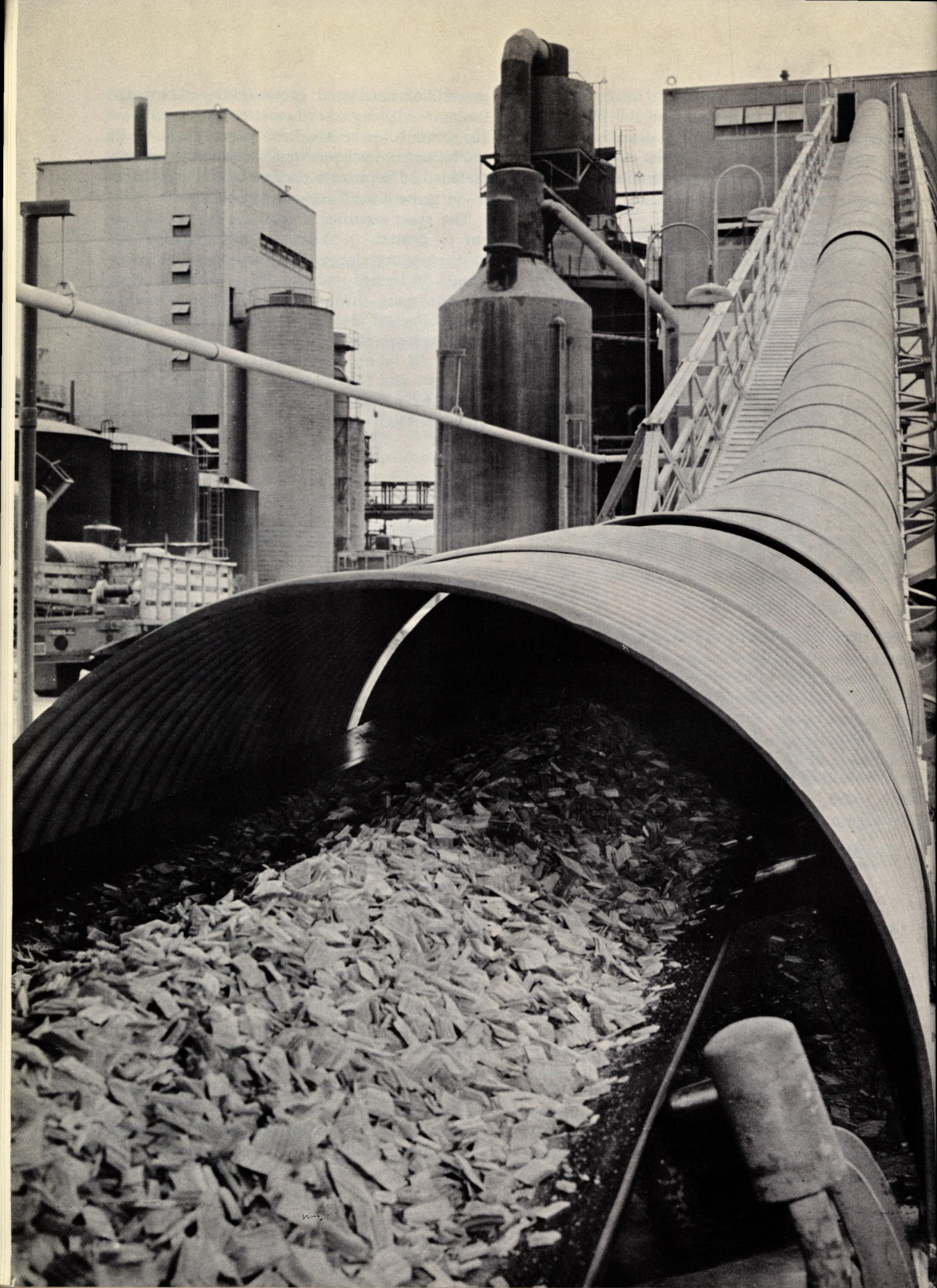


Figure 10. *Net annual growth and cut, in 1958, of softwoods 12 inches and larger in diameter; hardwoods, 16 inches and up.*

The timber outlook in Arkansas under current trends is mixed. In view of the downward trend in hardwood inventory and the continuing emphasis on harvesting large trees, it appears that recent production levels may not be maintained in terms of the size and quality of timber that have long sustained the traditional hardwood industries. Accelerated improvement in hardwood management and greater use of products with less exacting requirements—pulpwood, for example—would make the outlook more favorable. On the other hand, the upward trend in pine inventory plus the rising level of growth provide opportunities for industrial expansion. With further pine increases in sight, multi-million dollar additions to pulp and sawmill capacity are likely.



Timber Industries

In 1958 the production of industrial roundwood in Arkansas totaled 274 million cubic feet. Output of domestic-use products, chiefly fuelwood, was 77 million.

Lumber is still pre-eminent in industrial wood usage, but demand for paper products and availability of timber supplies has helped boost pulpwood to a new high. These two items constitute 90 percent of the industrial output. The remainder is largely veneer logs, cooperage bolts, poles, piling, and posts.

LUMBER IS MAINLY PINE

The lumber industry in Arkansas is as widely dispersed as the resource to which it is oriented. Virtually every county has several sawmills.

Changes in the industry during the postwar era have been striking. In 1958 there were 974 active sawmills in the State as compared to 1,736 in 1946. The decline has been chiefly in mills cutting less than 5 million board feet annually. Over 760 of them were scrapped, stored, or moved out of the State. Of the 925 sawmills producing under 5 million board feet in 1958, 794 cut less than a half million.

Mills sawing more than 5 million board feet annually numbered 49 in 1958, 52 in 1946. Their share of the industry's total output, however, increased from about 40 to 65 percent. These large mills are concentrated in the southern part of the State. Pine makes up three-fourths of their output, while that from smaller mills is chiefly hardwood.

The total Arkansas sawlog harvest exceeded a billion board feet in 1958. Three-fifths was softwood—almost all pine. Oak supplied three-fourths of the hardwood; sweetgum, blackgum, and tupelo most of the remainder.

About half of the hardwood lumber goes into flooring. Of the State's 30 flooring plants, 17 are operated in conjunction with sawmills. Others depend largely upon small sawmills for rough lumber. Unlike flooring manufacturers, Arkansas furniture makers generally purchase their rough lumber. Only 5 of the 59 wood-furniture plants in the State operate their own sawmills.

Arkansas sawmills also chipped 265,000 cords of debarked slabs, edgings, and other residues in 1958 for sale to pulp mills. Of this, 263,000 cords were pine, 2,000 were hardwood.

The South's first commercial facilities for converting sawmill waste into pulp chips were in Bradley County. From a negligible amount in 1952, use of pine chips in Arkansas has climbed to about 70 percent of the volume that might theoretically be made available at recent lumber output levels. Over 50 sawmills are now chipping residues. Though use of hardwood residues at sawmills has increased noticeably, chipping of hardwood is still in its infancy.

PULPWOOD TOPS MILLION CORDS

Pulp and paper is the fastest-growing segment of Arkansas' forest industry.

Between 1950 and 1959 production of round pulpwood nearly doubled. Only in 1957 did output fail to reach new highs. The 1959 harvest—1,192,400 cords—was 14 percent over the previous peak of 1958. As with bolts, pulpwood derived from residues hit a new high in 1959—332,000 cords.

Southern pines are the keystone of the industry. Currently, they supply about 85 percent of the round pulpwood. Hardwood use, however, is trending up (fig. 11). The industry's

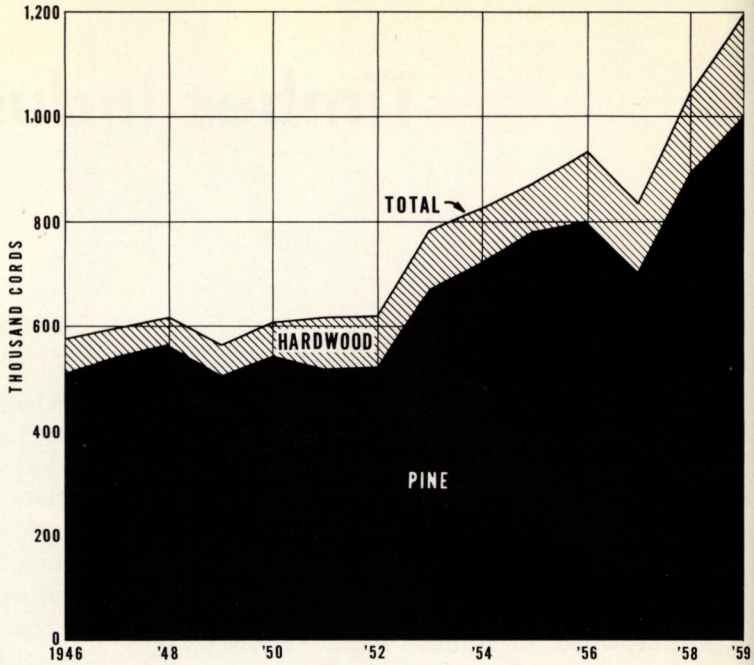


Figure 11. *Production of round pulpwood in Arkansas, 1946-59.*

preference is for soft-textured hardwoods that are also in demand for traditional forest products such as lumber, veneer, and slack cooperage. Sweetgum alone, for example, makes up three-fifths of the hardwood used in pulp manufacture. Oak and other firm-textured species, which comprise three-fourths of the hardwood timber in Arkansas, account for a fifth of the hardwood that is pulped.

Construction of two new mills and enlargement of the two already established increased total daily pulping capacity in Arkansas from 635 tons in 1946 to 2,285 tons in 1959. During this period, Arkansas' share of mill capacity in the seven Midsouth States increased from 9 to 12 percent. The average mill can now manufacture about 570 tons of pulp every day, as compared to 320 tons in 1946. Daily capability of individual mills ranges from 150 to 895 tons.

Plans have been announced for new mills in the vicinity of McGehee and Texarkana. These facilities are expected to have a combined capacity of some 800 tons daily. Expansion of existing mills both in Arkansas and north Louisiana is also under way. The pulpwood harvest in Arkansas thus promises to trend upward for some time. The continued growth of the pulp and paper industry provides timber owners, especially of pine, with a strong incentive for managing their holdings.

VENEER IS ALL HARDWOOD

Veneers manufactured in Arkansas are chiefly for the container and plywood industries, although some logs go into face veneers.

Arkansas forests supply about three-fourths of the volume of logs consumed by the State's veneer industry. Veneer log production in 1958 totaled 32 million board feet (4.5 million cubic feet), of which nearly 9 million were shipped out-of-state. These shipments were balanced by receipt of over 8 million board feet from Mississippi, Louisiana, and Texas. The 11 veneer mills in Arkansas thus consumed an average of 2.9 million board feet per plant (fig. 12). In 1948, the 18 mills active at that time used an average of 3.6 million per plant. Four of the seven plants that shut down manufactured container veneer. Their closure presumably reflects in part the impact of competitive products, such as paperboard cartons.

Open-market dealings are the primary means by which Arkansas veneer mills obtain logs. In 1958, the industry bought some 58 percent of its logs at the mill yard, mainly from contract loggers. Stumpage purchases accounted for another 23 percent. Though only 4 mills secured logs from their own land, the volume was 19 percent of the total.

Four-fifths of the veneer log volume cut in Arkansas is soft-textured hardwood. Sweet-,

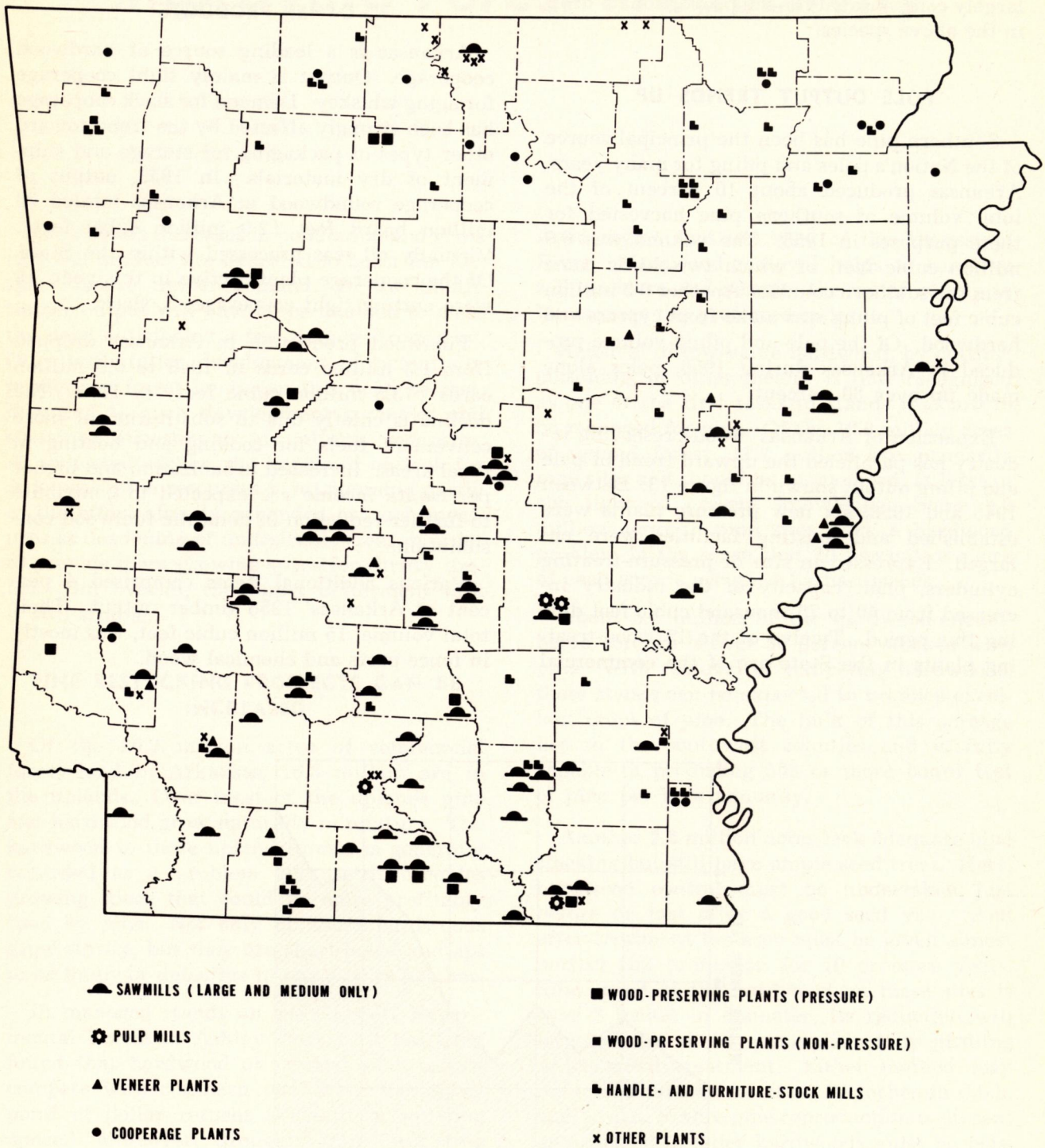


Figure 12. *Location of primary wood-using plants in Arkansas, 1958.*

black-, and tupelo gum made up 57 percent of the total 1958 veneer output, as compared to 78 percent in 1948. Other soft hardwoods largely compensated for the proportionate drop in the above species.

POLE OUTPUT TRENDS UP

Southern pine has been the principal source of the Nation's poles and piling for many years. Arkansas produced about 10 percent of the total volume of southern pine harvested for these purposes in 1958. The volume was 6.6 million cubic feet, of which two-thirds came from the southern counties. Another 0.2 million cubic feet of piling was made from cypress and hardwood. Of the pole and piling volume produced in Arkansas during 1958, poles alone made up over 80 percent.

Expansion of Arkansas' wood-preserving industry has paralleled the upward trend of pole and piling output shown in figure 13. Between 1948 and 1958, six new pressure plants were established and existing facilities were enlarged. Expressed in size of pressure-treating cylinders, plant capacity of the industry increased from 40 to 75 thousand cubic feet during this period. Twelve of the 15 wood-treating plants in the State are of the commercial pressure type. The three non-pressure plants largely treat pine fence posts.

OTHER PRODUCTS

Arkansas is a leading source of hardwood cooperage. Output is mainly tight cooperage for aging whiskey. Demand for slack cooperage has been strongly affected by the trend toward other types of packaging for storage and shipment of dry materials. In 1958, output of cooperage roundwood in Arkansas totaled 20 million board feet (2.9 million cubic feet). Virtually all was processed within the State. Of the cooperage plants active in this year, 19 were cutting tight cooperage; 3, slack.

Fuelwood production in Arkansas dropped from 1.3 million cords in 1948 to 0.9 million cords (73.5 million cubic feet) in 1958. The decline is chiefly due to substitution of more convenient fuels for cooking and heating in rural areas. Increased urbanization and higher per capita income are expected to contribute to further reduction in domestic fuelwood consumption.

Various additional items comprised 4 percent of Arkansas' 1958 timber output. Their total volume, 15 million cubic feet, was mostly in fence posts and chemical wood.

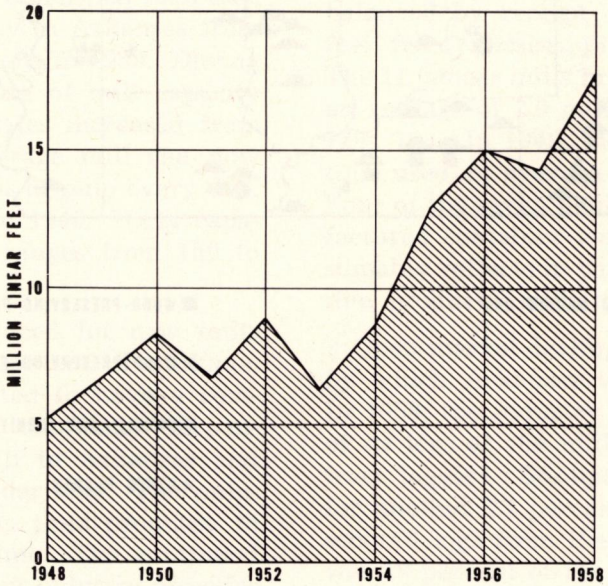


Figure 13. *Pole and piling production in Arkansas, 1948-58.*

Improving Forest Productivity

Anticipated increases in population and gross national product are expected to boost the Nation's future timber demand. In the South, timber output will have to be doubled to meet the need anticipated a few decades from now. Only with fuller development of potentially productive forest lands can this need be met. Essential to such development is heavy and sustained investment in cultural measures. As indicated earlier, the improved outlook for Arkansas' pine resources is attributable partly to the effort already expended on such measures as deadening of undesirable trees in order to provide more growing space for thrifty timber. But overall, the forest betterment task is still sizable.

PINE RESTOCKING PROSPECTS CAN BE INCREASED

Of the 20.8 million acres of commercial forest land in Arkansas, 16.3 million are in the uplands. Over most of the uplands pine and hardwood grow naturally in mixture. The hardwood in these upland forests is generally regarded as a problem because it occupies growing space that could be more profitably used by pine. Not only do these hardwoods grow slowly, but they are short-boled and apt to be limby or defective in one way or another.

In managed stands on the Crossett Experimental Forest in Ashley County, it has been found that hardwood on upland sites cannot compete with southern pine from the standpoint of dollar returns per unit of growing space.[3] Moreover, droughts that limit tree growth occur nearly every summer throughout that portion of the shortleaf-loblolly pine-hardwood region that lies west of the Mississippi River.[4] Hardwood removal helps to conserve soil moisture and permits the water supply to be used by the preferred pines.

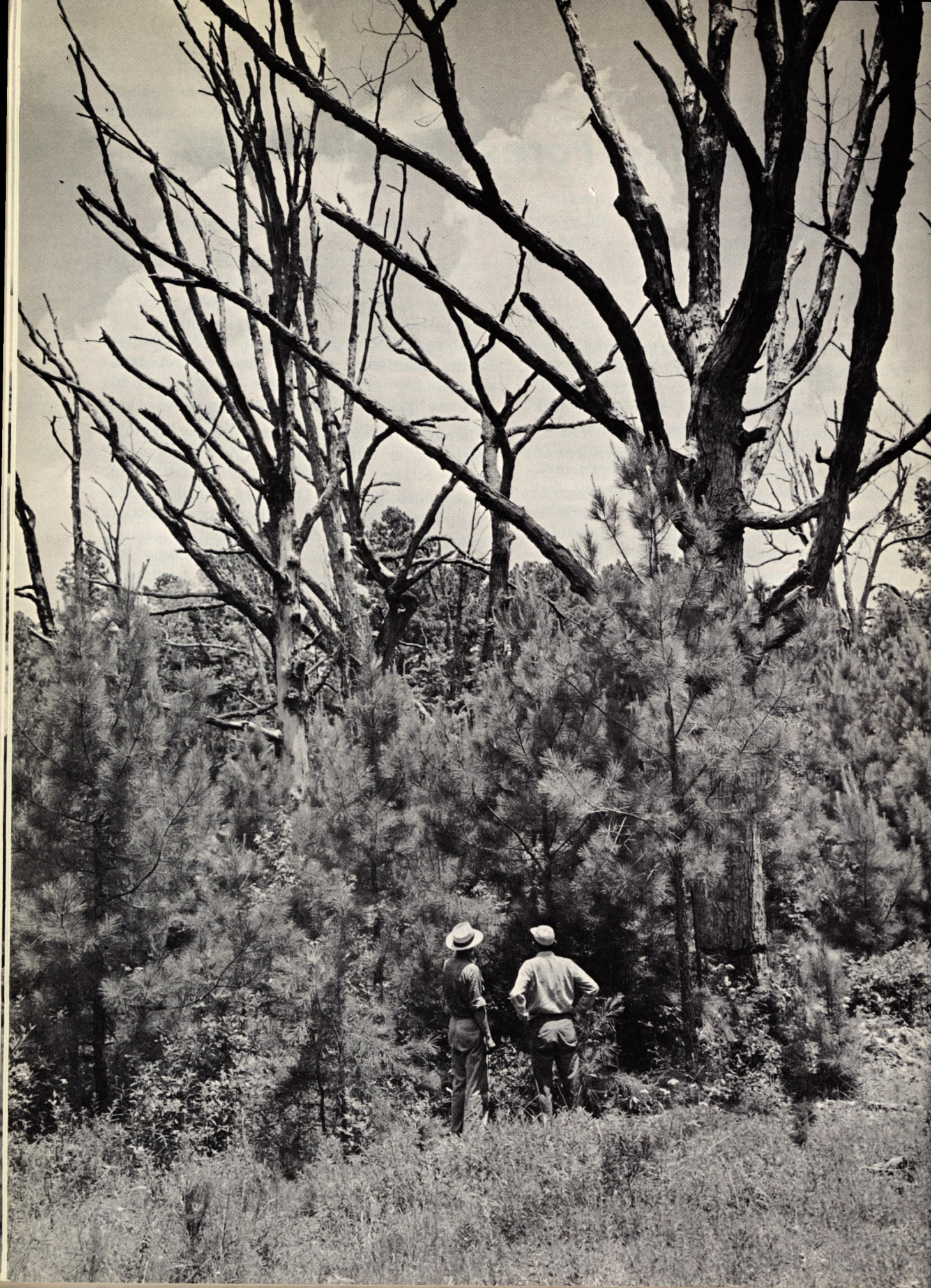
Removal of low-value hardwood, by cutting, poisoning, or other means, is now recognized as one of the first tasks in stands that are to be managed for pine. Of the 16.3 million acres of upland forest, 11.7 million are primarily pine sites and should be so managed, at least in the light of present knowledge. Some 9.9 million acres in pine sites have a hardwood problem in the sense that 20 percent or more of each acre is occupied by hardwoods.

About 3.4 million of the hardwood-encumbered acreage is over 50 percent stocked with pine. With removal of competing hardwoods, these stands can be expected to produce excellent crops of pine. The bulk of this acreage lies in the southwest counties and is fully capable of producing 500 or more board feet of pine per acre annually.

Another 2.2 million acres lack adequate pine stocking but still have ample seed trees. Here, hardwood control must be undertaken just before or just after a good seed year. And after treatment the area must be given almost perfect fire protection for 10 or more years. Since most of the hardwood on these sites is over 2 inches in diameter, its reduction will largely have to be accomplished by girdling or chemical treatment. Either method may prove satisfactory for trees 10 inches in d.b.h. and larger. Where pine reproduction is present or expected, smaller hardwoods must be poisoned if seedlings are not to be crowded out by vigorous sprout competition.

[3] Reynolds, R. R. **Eighteen years of selection timber management on the Crossett Experimental Forest.** U. S. Dept. Agr. Tech. Bul. 1206, 68 pp., illus. 1959.

[4] Moyle, R. C., and Zahner, R. **Soil moisture as affected by stand conditions.** U. S. Forest Serv. South. Forest Expt. Sta. Occas. Paper 137, 14 pp., illus. 1954.



On the remaining 4.3 million acres there is neither adequate pine stocking nor enough seed trees. Restoration may be expensive because both intensive hardwood control and planting or direct seeding of pine will be needed. On those acres with some pine stocking, partial or reinforcement planting will do the job. An additional 300,000 plantable acres, nearly half of which are in and around Nevada and Columbia Counties, are free of serious hardwood competition. These estimates do not include fields that are no longer in cultivation but have not yet reverted to forest and on which planting may also be desirable for erosion control, watershed protection, or other reasons.

CULL-TREE CONTROL WIDELY NEEDED

Arkansas has 9 million acres of commercial forest that appear to be primarily suited to growing hardwood. The great majority of these timberlands are without management, or are still in the early stages of transition from unmanaged to managed forests. Past treatment has left most hardwood sites burdened with a high proportion of stems that are undesirable as future growing stock.

Some of the undesirable components include trees with sufficient merchantable volume to warrant removal in commercial improvement cuts. Additionally, many stands are loaded with outright culls. All told, more than 5 million acres of hardwood sites in Arkansas are noticeably hampered with cull trees. That is, a sixth or more of each acre is dominated by trees unmerchantable now or prospectively for veneer, factory lumber, or other high-quality products. Removal of this material will make openings essential for reproduction and will release desirable growing stock already established.

Much of the sound volume in cull trees could, of course, serve for fuelwood or other farm-use products if demand were sufficient. With increasing markets for wood fiber, some of it can be channelled into pulpwood. For example, cull-tree volume in soft-textured hardwoods generally acceptable for pulping totals 3.5 million cords on hardwood sites alone. But the total quantity on these sites—about 19 million cords—is so large that investment in deadening is likely to prove the only effective way of rapidly reducing this tremendous overburden.

FUTURE DEPENDS ON NONINDUSTRIAL LANDOWNERS

Review of forestry progress in Arkansas indicates that the greatest advances in management have been made on the holdings of timber-connected industries and public agencies. These lands make up only 7 million acres. Furthermore, the 3 million acres in public ownership for the most part are on the least productive forest soils.

The lion's share of the commercial timberland consists of nearly 14 million acres in farm and other private nonindustrial holdings. Currently, volume averages 425 cubic feet per acre. It is on these ownerships that opportunities for increasing timber yields through stand improvement are the greatest. If the average volume on such lands within each of the major physiographic regions were raised to that on the public and industrial lands, the 14 million acres would support an average of 798 cubic feet per acre, or about 1.9 times their current volume. If increased to this level during the next few decades, the private nonindustrial holdings might be considered to have achieved a reasonable share of their potential productivity. Even so, with the further improvement expected during the years ahead on public and industry lands, the growing stock on the 14 million acres would still be less than the State average.

Thus the forestry efforts of the 160,000 owners of private, nonindustrial timberlands will decide whether Arkansas realizes its potential timber economy before the turn of the century. The sixties are the decade of decision.

Appendix

ACCURACY OF THE SURVEY

The data on forest acreage and timber volume in this report were secured by a systematic sampling method involving a forest-nonforest classification on aerial photographs and on-the-ground measurements of trees at sample points. In the Delta, Ouachita, and southwest regions, the sample points were taken in pairs at and near the intersections of a grid of lines spaced 3 miles apart; in the Ozark region the average spacing was 4.2 miles. Tally trees were selected with a 3.03 diopter prism.

Accuracy of the estimates may be affected by two types of errors. The first stems from the use of a sample to estimate the whole and from variability of the items being sampled. This type is termed sampling error; it is susceptible to a mathematical evaluation of the probability of error. The second type—often referred to as reporting or estimating error—derives from mistakes in measurement, judgment, arithmetic, or recording, and limitations of method or equipment. Its effects cannot be appraised mathematically, but the Forest Survey constantly attempts to hold such error to a minimum by proper training and good supervision, and by emphasis on careful work.

Statistical analysis of the data indicates a sampling error of plus or minus 0.3 percent for the estimate of total forest area, 1.2 percent for total cubic volume, and 1.9 percent for total board-foot volume. As the acreage and volume totals for the State are broken down by forest type, species, county, and other subdivisions of the data, the possibility of error increases and is greatest for the smallest items. The order of this increase is suggested in the following tabulation, which shows the sampling error to which the estimates are liable two chances out of three.

Forest area		Cubic volume		Board-foot volume	
Size of area sampled	Sampling error [1]	Volume sampled	Sampling error [2]	Volume sampled	Sampling error [2]
Thousand acres	*Percent*	*Million cu. ft.*	*Percent*	*Million bd. ft.*	*Percent*
21,000	0.3	12,000	1.2	41,000	1.7
10,000	0.4	6,000	1.7	20,000	2.4
5,000	0.6	3,000	2.4	10,000	3.5
2,000	1.0	1,000	4.2	5,000	4.9
500	1.9	500	5.9	2,000	7.7
100	4.3	100	13.2	300	19.9

[1] By random-sampling formula.

[2] Estimated by use of a procedure described by D. B. DeLury in **Values and Integrals of the Orthogonal Polynomials up to n = 26.** Univ. Toronto Press, 33 pp. Toronto, Ont. 1950.

County data on timber volume have been included in the report. Sampling error on growing stock approaches plus or minus 15 percent in counties with 72 million cubic feet of volume. The sampling error for most county estimates of cubic volume will range from plus or minus 6 percent to plus or minus 26 percent. Grouping counties greatly strengthens the total volume data and is necessary to provide reliable estimates of species-group breakdowns of volume. Groupings of a million acres or more of forest land are recommended.

Growth estimates were derived from radial-growth measurements and mortality data taken at sample points. No attempt was made to calculate sampling error in these estimates.

Estimates of annual cut are based on studies conducted during the period of forest inventory. The sampling error to which the total cubic-foot estimate of annual cut is liable, on a probability of two chances out of three, is plus or minus 3.0 percent.

In computing changes in timber volumes since 1951, data from the earlier survey were adjusted to make them closely comparable to those from the latest survey. This was necessary because of certain basic differences between the two sets of data. In every case, the data from the earlier survey were adjusted to conform to the standards of the latest survey before the change was computed.

DEFINITIONS OF TERMS

Forest Land Class

Forest land.—Includes: (a) land which is at least 10 percent stocked by trees of any size and capable of producing timber or other wood products, or of exerting an influence on the climate or on the water regime; (b) land from which the trees have been removed to less than 10 percent stocking and which has not been developed for other use; (c) afforested areas.

Commercial forest land.—Forest land which is (a) producing, or is physically capable of producing, usable crops of wood (usually sawtimber), (b) economically available now or prospectively, and (c) not withdrawn from timber utilization.

Noncommercial forest land.—Forest land (a) withdrawn from timber utilization through statute, ordinance, or administrative order but which otherwise qualifies as commercial forest land and (b)

incapable of yielding usable wood products (usually sawtimber) because of adverse site conditions, or so physically inaccessible as to be unavailable economically in the foreseeable future.

Tree Species

Commercial species.—Includes species that normally have value for commercial timber products; excludes so-called weed or noncommercial species such as blackjack oak, scrub post oak, blue beech, scurwood, etc.

Softwoods.—Loblolly pine *(Pinus taeda)*, shortleaf pine *(P. echinata)*, cypress *(Taxodium distichum)*, and cedar *(Juniperous virginiana)*.

Hardwoods.—Broadleaved species, of which the most numerous are the oaks *(Quercus* spp.) and sweetgum *(Liquidambar styraciflua)*.

Forest Type

Forest type is determined upon the basis of the predominant species as indicated by cubic volume for sawtimber and poletimber stands, and number of trees for seedling-sapling stands.

Loblolly-shortleaf pine.—Forests in which 50 percent or more of the stand is loblolly pine, shortleaf pine, or other southern yellow pines excepting longleaf or slash pine, singly or in combination. Common associates include oak, hickory, and gum.

Oak-pine.—Forests in which 50 percent or more of the stand is hardwoods, usually upland oaks, but in which southern pines make up 25-49 percent of the stand. Common associates include gum, hickory, and yellow-poplar.

Cedar.—Forests in which 25 percent or more of the stand is cedar. Common associates include oak and hickory.

Oak-hickory.—Forests in which 50 percent or more of the stand is upland oaks or hickory, singly or in combination, except where pines comprise 25-49 percent (or cedar at least 25 percent) in which case the stand would be classified oak-pine (or cedar). Common associates include yellow-poplar, elm, maple, and black walnut.

Oak-gum-cypress.—Bottom-land forests in which 50 percent or more of the stand is tupelo, blackgum, sweetgum, oaks, or southern cypress, singly or in combination, except where pines comprise 25-49 percent in which case the stand would be classified oak-pine. Common associates include cottonwood, willow, ash, elm, hackberry, and maple.

Elm-ash-cottonwood.—Forests in which 50 percent or more of the stand is elm, ash, or cottonwood, singly or in combination. Common associates include willow, sycamore, beech, and maple.

Class of Timber

Sawtimber trees.—Live trees of commercial species at least 9.0 inches d.b.h. in softwoods and 11.0 inches d.b.h. in hardwoods, that contain at least an 8-foot merchantable butt log—or, if the butt log is a cull, at least 50 percent of the gross sawlog volume is in merchantable logs. To be merchantable, a log must meet the following requirements:

(a) In softwoods, logs having a minimum 6-inch small-end diameter inside bark and at least one-third sound, with sweep or crook not exceeding two-thirds the small-end diameter.

(b) In hardwoods, logs having a minimum 8-inch small-end diameter inside bark and which meet the specifications of a standard lumber log or a tie and timber log.

Poletimber trees.—Trees of commercial species which meet regional specifications of soundness and form, and which are of the following diameters at breast height: softwoods 5.0 to 9.0 inches; hardwoods 5.0 to 11.0 inches. (Such trees will usually become sawtimber trees if left to grow.)

Seedling and sapling trees.—Live trees of commercial species less than 5.0 inches in diameter at breast height and of good form and vigor.

Cull trees.—Live trees of sawtimber or poletimber size that are unmerchantable for sawlogs now or prospectively because of defect, rot, or species.

Rotten cull trees.—Live trees of sawtimber or poletimber size which fail to meet regional specifications of proportion of sound volume to total volume.

Sound cull trees.—Live trees of sawtimber or poletimber size which meet regional specifications of freedom from rot but will not make at least one merchantable sawlog now or prospectively according to regional specifications because of roughness, poor form, or species.

Hardwood limbs.—Limbs of hardwood sawtimber trees and sawtimber-size cull hardwood trees to a minimum diameter of 4.0 inches inside bark.

Stand-size Class

Large sawtimber.—Stands with sawtimber trees having a minimum net volume per acre of 1,500 board feet, International ¼-inch rule, and at least half of this volume in sawtimber trees 15.0 inches d.b.h. and larger.

Small sawtimber.—Stands with sawtimber trees having a minimum net volume per acre of 1,500 board feet, International ¼-inch rule, but which do not meet the specifications for large sawtimber.

Poletimber.—Stands failing to meet the sawtimber stand specification, but at least 10 percent stocked with poletimber and larger (5.0 inches d.b.h. and larger) trees and with at least half the minimum stocking in poletimber trees.

Seedling and sapling.—Stands not qualifying as either sawtimber or poletimber stands, but having at least 10 percent stocking of trees of commercial species and with at least half the minimum stocking in seedling and sapling trees.

Nonstocked and other areas.—Commercial forest land not qualifying as sawtimber, poletimber, or seedling and sapling stands.

Tree Stocking

Stocking is the extent to which growing space is effectively utilized by present or potential growing-stock trees of commercial species. Stands are considered to be well stocked when the percentage of full stocking is 70 or above, medium stocked when the percentage is 40 to 69, poorly stocked when the percentage is 10 to 39, and nonstocked when the percentage is under 10.

Volume

Sawtimber volume.—Net volume in board feet, International ¼-inch rule, of live sawtimber trees to a specified merchantable top.

Growing stock.—Net volume in cubic feet of live sawtimber and live poletimber trees from stump to a minimum 4.0-inch top diameter (of central stem) inside bark.

All-timber volume.—Net volume in cubic feet of live and salvable dead sawtimber trees and poletimber trees of commercial species, and cull trees of all species from stump to a minimum 4.0-inch top inside bark. Includes bole only of softwoods but both bole and limbs of hardwoods to a minimum 4.0-inch diameter inside bark.

Softwood Log Grades

Softwood log grades are based on the value yield per unit outturn of yard lumber. The value of lumber yield may be expressed relative to the value of No. 2 Common lumber taken as 100 percent. Expressed thus, studies have shown that lumber from grade 1 logs has a value 244 percent as great as No. 2 Common lumber, while the corresponding percentages are 189 percent for grade 2 logs, 142 percent for grade 3 logs, and 107 percent for grade 4 logs. For detailed specifications of log grades, see *Interim log grades for southern pine,* U. S. Forest Service, Southern Forest Experiment Station, 18 pp. 1953.

Hardwood Log Class

Specifications for standard lumber logs (hardwood log grades 1, 2, and 3) are based on suitability for standard factory lumber. Studies have shown that for nearly all species tested, the yield of No. 1 Common and better lumber in grade 1 logs varies from 65 to 80 percent; in grade 2 logs from 40 to 64 percent; and in grade 3 logs from 13 to 36 percent. For detailed specifications of log grades, see *Hardwood log grades for standard lumber: proposals and results,* U. S. Forest Products Laboratory D1737. 1949.

Tie and timber logs are suitable for ties, timbers, and certain other construction lumber items. Specifications for tie and timber logs are based chiefly on knot size and log soundness; clear cuttings are not required.

Stand Quality

Fair and better.—A stand in which at least four grade-2 or better logs are present per acre.

Poor.—A stand in which fewer than four grade-2 or better logs are present per acre.

Miscellaneous Definitions

Farm ownership.—Private commercial forest land in farms, but excluding lands on which farm operators do not control timber use.

Basal area.—Cross-sectional area, including bark, of trees at breast height, measured in square feet.

D. b. h. (Diameter breast high).—Tree diameter in inches, outside bark, measured at 4-½ feet above ground.

Diameter class.—The 2-inch diameter classes extend from 1.0 inch below to 0.9 inch above the stated midpoint. Thus, the 12-inch class includes trees 11.0 inches to and including 12.9 inches d.b.h.

Net annual growth of sawtimber.—The change during a specified year in net board-foot volume of live sawtimber on commercial forest land resulting from natural causes.

Net annual growth of growing stock.—The change during a specified year in net cubic-foot volume of growing stock on commercial forest land resulting from natural causes.

Annual mortality.—The net volume, excluding salvage, removed from live sawtimber and from growing stock during a specified year through death from natural causes.

Annual cut of sawtimber.—The net board-foot volume of live sawtimber trees cut or killed by logging, and by cultural operations, on commercial forest land during a specified year.

Annual cut of growing stock.—The net cubic-foot volume of live sawtimber and poletimber trees cut or killed by logging, or by cultural operations, on commercial forest land during a specified year.

Timber products output.—The volume of timber products cut from both growing stock and other sources.

DETAILED TABLES

Table 7. *Land area and commercial forest by county, 1959*

County	All land	Commercial forest	
	Thousand acres	*Thousand acres*	*Percent*
Arkansas	662.4	276.1	41.7
Ashley	597.2	461.4	77.3
Baxter	341.8	281.0	82.2
Benton	567.0	301.1	53.1
Boone	378.7	252.8	66.8
Bradley	415.4	358.0	86.2
Calhoun	401.9	342.2	85.1
Carroll	405.8	253.3	62.4
Chicot	414.1	184.3	44.5
Clark	562.0	448.4	79.8
Clay	416.0	127.2	30.6
Cleburne	380.8	265.0	69.6
Cleveland	384.6	309.3	80.4
Columbia	491.5	348.0	70.8
Conway	358.4	170.1	47.5
Craighead	458.9	87.1	19.0
Crawford	382.7	248.3	64.9
Crittenden	398.7	61.8	15.5
Cross	400.6	120.2	30.0
Dallas	430.1	382.8	89.0
Desha	496.6	274.1	55.2
Drew	535.0	424.3	79.3
Faulkner	419.8	180.8	43.1
Franklin	393.6	244.5	62.1
Fulton	389.1	254.2	65.3
Garland	435.6	370.5	85.1
Grant	403.8	353.0	87.4
Greene	370.6	112.3	30.3
Hempstead	470.4	291.1	61.9
Hot Spring	397.4	325.0	81.8
Howard	384.0	286.1	74.5
Independence	483.2	292.3	60.5
Izard	367.4	238.2	64.8
Jackson	407.7	129.2	31.7
Jefferson	569.6	268.2	47.1
Johnson	432.6	326.2	75.4
Lafayette	338.4	238.0	70.3
Lawrence	378.9	148.5	39.2
Lee	396.8	161.0	40.6
Lincoln	361.6	171.8	47.5
Little River	348.2	240.6	69.1
Logan	463.4	292.4	63.1
Lonoke	512.0	152.8	29.8
Madison	532.5	402.5	75.6
Marion	375.8	301.2	80.1
Miller	401.3	268.3	66.9
Mississippi	589.4	56.1	9.5
Monroe	394.9	219.9	55.7
Montgomery	498.3	428.5	86.0
Nevada	394.2	301.6	76.5
Newton	526.1	470.7	89.5
Ouachita	472.3	387.4	82.0
Perry	355.2	288.1	81.1
Phillips	450.5	156.9	34.8
Pike	386.4	329.2	85.2
Poinsett	487.7	108.2	22.2
Polk	550.4	462.8	84.1
Pope	522.2	350.2	67.1
Prairie	431.4	176.1	40.8
Pulaski	490.8	297.1	60.5
Randolph	407.7	224.2	55.0
St. Francis	407.0	108.2	26.6
Saline	464.0	389.8	84.0
Scott	574.8	471.0	82.0
Searcy	425.0	328.0	77.2
Sebastian	338.6	137.9	40.7
Sevier	374.4	297.6	79.5
Sharp	381.4	266.4	69.8
Stone	390.4	323.5	82.9
Union	673.3	567.4	84.3
Van Buren	457.0	344.3	75.3
Washington	616.4	332.7	54.0
White	666.9	344.4	51.6
Woodruff	378.9	149.2	39.4
Yell	597.1	414.1	69.4
All counties	33,616.6	20,757.0	61.7

Table 8. *Commercial forest land by stand size and forest type, by Survey region, 1959*

Forest type	All stand sizes	Large saw-timber	Small saw-timber	Pole-timber	Seedling and sapling	Non-stocked & other areas [1]
	Thousand acres					
STATE OF ARKANSAS						
Softwood types:						
Loblolly-shortleaf pine	6,485.6	1,266.7	2,557.1	1,896.3	658.1	107.4
Oak-pine	1,697.1	175.0	208.8	844.9	438.8	29.6
Cedar	595.1	...	...	138.8	445.3	11.0
Total	8,777.8	1,441.7	2,765.9	2,880.0	1,542.2	148.0
Hardwood types:						
Oak-hickory	7,524.2	352.5	389.2	3,950.7	2,614.9	216.9
Elm-ash-cottonwood	458.0	156.9	...	123.0	133.6	44.5
Oak-gum-cypress	3,997.0	1,145.4	488.2	1,494.6	703.4	165.4
Total	11,979.2	1,654.8	877.4	5,568.3	3,451.9	426.8
All types	20,757.0	3,096.5	3,643.3	8,448.3	4,994.1	574.8
SOUTHWEST						
Softwood types:						
Loblolly-shortleaf pine	3,596.8	938.5	1,466.6	669.6	435.2	86.9
Oak-pine	911.8	139.4	146.3	379.7	235.8	10.6
Cedar	...	...	...	...	...	...
Total	4,508.6	1,077.9	1,612.9	1,049.3	671.0	97.5
Hardwood types:						
Oak-hickory	982.2	55.8	111.0	537.0	255.6	22.8
Elm-ash-cottonwood	108.6	27.9	...	22.5	46.0	12.2
Oak-gum-cypress	1,360.3	354.8	197.1	464.1	282.7	61.6
Total	2,451.1	438.5	308.1	1,023.6	584.3	96.6
All types	6,959.7	1,516.4	1,921.0	2,072.9	1,255.3	194.1
OUACHITA						
Softwood types:						
Loblolly-shortleaf pine	2,159.6	291.0	879.2	872.8	105.3	11.3
Oak-pine	315.5	11.8	24.4	192.5	86.8	...
Cedar	43.0	...	...	18.3	24.7	...
Total	2,518.1	302.8	903.6	1,083.6	216.8	11.3
Hardwood types:						
Oak-hickory	841.0	16.7	11.2	393.2	414.4	5.5
Elm-ash-cottonwood	27.6	5.3	...	10.9	11.4	...
Oak-gum-cypress	165.5	16.9	28.4	85.1	23.8	11.3
Total	1,034.1	38.9	39.6	489.2	449.6	16.8
All types	3,552.2	341.7	943.2	1,572.8	666.4	28.1
OZARK						
Softwood types:						
Loblolly-shortleaf pine	622.1	13.6	167.0	333.5	98.8	9.2
Oak-pine	430.7	18.7	33.4	253.5	106.1	19.0
Cedar	539.7	...	...	114.3	414.4	11.0
Total	1,592.5	32.3	200.4	701.3	619.3	39.2
Hardwood types:						
Oak-hickory	5,100.6	232.6	225.0	2,720.7	1,773.7	148.6
Elm-ash-cottonwood	35.0	9.2	...	12.2	...	13.6
Oak-gum-cypress	267.8	86.1	41.3	76.3	54.2	9.9
Total	5,403.4	327.9	266.3	2,809.2	1,827.9	172.1
All types	6,995.9	360.2	466.7	3,510.5	2,447.2	211.3
SOUTH DELTA						
Softwood types:						
Loblolly-shortleaf pine	93.1	23.6	39.6	15.8	14.1	...
Oak-pine	34.4	5.1	4.7	14.5	10.1	...
Cedar	...	...	...	...	...	...
Total	127.5	28.7	44.3	30.3	24.2	...
Hardwood types:						
Oak-hickory	305.3	24.0	32.8	160.4	59.3	28.8
Elm-ash-cottonwood	165.6	52.2	...	55.6	39.1	18.7
Oak-gum-cypress	1,442.8	540.5	133.5	504.7	207.2	56.9
Total	1,913.7	616.7	166.3	720.7	305.6	104.4
All types	2,041.2	645.4	210.6	751.0	329.8	104.4
NORTH DELTA						
Softwood types:						
Loblolly-shortleaf pine	14.0	...	4.7	4.6	4.7	...
Oak-pine	4.7	...	...	4.7	...	...
Cedar	12.4	...	...	6.2	6.2	...
Total	31.1	...	4.7	15.5	10.9	...
Hardwood types:						
Oak-hickory	295.1	23.4	9.2	139.4	111.9	11.2
Elm-ash-cottonwood	121.2	62.3	...	21.8	37.1	...
Oak-gum-cypress	760.6	147.1	87.9	364.4	135.5	25.7
Total	1,176.9	232.8	97.1	525.6	284.5	36.9
All types	1,208.0	232.8	101.8	541.1	295.4	36.9

[1] Includes areas not classified elsewhere.

Table 9. *Commercial forest land by degree of tree stocking and forest type, by Survey region, 1959*

Forest type	All stocking	Well stocked	Medium stocked	Poorly stocked	Non-stocked
	Thousand acres				
STATE OF ARKANSAS					
Softwood types:					
Loblolly-shortleaf pine	6,485.6	5,267.5	821.0	332.5	64.6
Oak-pine	1,697.1	1,206.9	300.3	160.4	29.5
Cedar	595.1	277.1	201.3	116.7	...
Total	8,777.8	6,751.5	1,322.6	609.6	94.1
Hardwood types:					
Oak-hickory	7,524.2	4,876.7	1,609.6	892.6	145.3
Elm-ash-cottonwood	458.0	207.1	113.4	99.7	37.8
Oak-gum-cypress	3,997.0	2,538.9	946.5	424.8	86.8
Total	11,979.2	7,622.7	2,669.5	1,417.1	269.9
All types	20,757.0	14,374.2	3,992.1	2,026.7	364.0
SOUTHWEST					
Softwood types:					
Loblolly-shortleaf pine	3,596.8	2,855.9	457.7	239.0	44.2
Oak-pine	911.8	664.8	132.6	103.9	10.5
Cedar	...	...	...	...	...
Total	4,508.6	3,520.7	590.3	342.9	54.7
Hardwood types:					
Oak-hickory	982.2	623.2	212.5	129.1	17.4
Elm-ash-cottonwood	108.6	74.1	16.8	5.5	12.2
Oak-gum-cypress	1,360.3	913.5	283.6	128.3	34.9
Total	2,451.1	1,610.8	512.9	262.9	64.5
All types	6,959.7	5,131.5	1,103.2	605.8	119.2
OUACHITA					
Softwood types:					
Loblolly-shortleaf pine	2,159.6	1,861.5	258.1	28.8	11.2
Oak-pine	315.5	206.7	75.0	33.8	...
Cedar	43.0	19.5	23.5	...	...
Total	2,518.1	2,087.7	356.6	62.6	11.2
Hardwood types:					
Oak-hickory	841.0	484.6	236.9	113.9	5.6
Elm-ash-cottonwood	27.6	...	21.9	5.7	...
Oak-gum-cypress	165.5	108.3	34.3	17.2	5.7
Total	1,034.1	592.9	293.1	136.8	11.3
All types	3,552.2	2,680.6	649.7	199.4	22.5
OZARK					
Softwood types:					
Loblolly-shortleaf pine	622.1	453.1	95.1	64.7	9.2
Oak-pine	430.7	311.5	82.6	17.6	19.0
Cedar	539.7	251.4	177.8	110.5	...
Total	1,592.5	1,016.0	355.5	192.8	28.2
Hardwood types:					
Oak-hickory	5,100.6	3,446.1	1,013.5	529.4	111.6
Elm-ash-cottonwood	35.0	9.2	12.2	...	13.6
Oak-gum-cypress	267.8	185.0	46.3	36.5	...
Total	5,403.4	3,640.3	1,072.0	565.9	125.2
All types	6,995.9	4,656.3	1,427.5	758.7	153.4
SOUTH DELTA					
Softwood types:					
Loblolly-shortleaf pine	93.1	87.7	5.4	...	...
Oak-pine	34.4	23.9	5.4	5.1	...
Cedar	...	...	...	...	...
Total	127.5	111.6	10.8	5.1	...
Hardwood types:					
Oak-hickory	305.3	188.7	43.1	67.8	5.7
Elm-ash-cottonwood	165.6	86.1	25.2	42.3	12.0
Oak-gum-cypress	1,442.8	904.1	348.3	165.3	25.1
Total	1,913.7	1,178.9	416.6	275.4	42.8
All types	2,041.2	1,290.5	427.4	280.5	42.8
NORTH DELTA					
Softwood types:					
Loblolly-shortleaf pine	14.0	9.3	4.7	...	...
Oak-pine	4.7	...	4.7	...	...
Cedar	12.4	6.2	...	6.2	...
Total	31.1	15.5	9.4	6.2	...
Hardwood types:					
Oak-hickory	295.1	134.1	103.6	52.4	5.0
Elm-ash-cottonwood	121.2	37.7	37.3	46.2	...
Oak-gum-cypress	760.6	428.0	234.0	77.5	21.1
Total	1,176.9	599.8	374.9	176.1	26.1
All types	1,208.0	615.3	384.3	182.3	26.1

Table 10. *Area of sawtimber stands by stand quality and forest type, by Survey region, 1959*

Forest type	All qualities	Fair or better	Poor	All qualities	Fair or better	Poor
	Thousand acres			*Thousand acres*		
	STATE OF ARKANSAS			OZARK		
Softwood types:						
Loblolly-shortleaf pine	3,823.8	2,021.3	1,802.5	180.6	57.0	123.6
Oak-pine	383.8	169.7	214.1	52.1	14.1	38.0
Cedar	...	...	...	...	...	...
Total	4,207.6	2,191.0	2,016.6	232.7	71.1	161.6
Hardwood types:						
Oak-hickory	741.7	210.5	531.2	457.6	117.0	340.6
Elm-ash-cottonwood	156.9	106.0	50.9	9.2	9.2	...
Oak-gum-cypress	1,633.6	849.9	783.7	127.4	77.0	50.4
Total	2,532.2	1,166.4	1,365.8	594.2	203.2	391.0
All types	6,739.8	3,357.4	3,382.4	826.9	274.3	552.6
	SOUTHWEST			SOUTH DELTA		
Softwood types:						
Loblolly-shortleaf pine	2,405.1	1,387.3	1,017.8	63.2	28.2	35.0
Oak-pine	285.7	150.5	135.2	9.8	5.1	4.7
Cedar	...	...	...	...	...	...
Total	2,690.8	1,537.8	1,153.0	73.0	33.3	39.7
Hardwood types:						
Oak-hickory	166.8	49.2	117.6	56.8	22.9	33.9
Elm-ash-cottonwood	27.9	27.9	...	52.2	33.4	18.8
Oak-gum-cypress	551.9	313.0	238.9	674.0	383.9	290.1
Total	746.6	390.1	356.5	783.0	440.2	342.8
All types	3,437.4	1,927.9	1,509.5	856.0	473.5	382.5
	OUACHITA			NORTH DELTA		
Softwood types:						
Loblolly-shortleaf pine	1,170.2	548.8	621.4	4.7	...	4.7
Oak-pine	36.2	...	36.2	...	...	...
Cedar	...	...	...	...	...	...
Total	1,206.4	548.8	657.6	4.7	...	4.7
Hardwood types:						
Oak-hickory	27.9	16.7	11.2	32.6	4.7	27.9
Elm-ash-cottonwood	5.3	5.3	...	62.3	30.2	32.1
Oak-gum-cypress	45.3	5.3	40.0	235.0	70.7	164.3
Total	78.5	27.3	51.2	329.9	105.6	224.3
All types	1,284.9	576.1	708.8	334.6	105.6	229.0

Table 11. *Basal area per acre of growing stock and cull trees by forest type and Survey region, 1959*

Forest type	State of Arkansas	Southwest	Ouachita	Ozark	South Delta	North Delta
	Square feet					
Loblolly-shortleaf pine:						
2- and 4-inch good trees [1]	18.6	17.3	21.8	15.1	23.5	10.9
Growing stock	52.5	54.2	53.8	37.6	57.2	28.3
2- and 4-inch poor trees	4.2	4.0	4.5	4.4	2.7	8.9
Cull trees	6.7	6.2	7.0	8.8	4.2	3.8
All trees	82.0	81.7	87.1	65.9	87.6	51.9
Oak-pine:						
2- and 4-inch good trees [1]	15.9	18.6	13.1	12.8	11.7	...
Growing stock	33.7	38.0	28.7	28.1	37.2	23.6
2- and 4-inch poor trees	5.3	4.5	5.8	6.9	.6	...
Cull trees	11.0	9.3	14.4	12.8	5.2	9.6
All trees	65.9	70.4	62.0	60.6	54.7	33.2
Cedar:						
2- and 4-inch good trees [1]	11.3	...	16.7	11.0	...	6.9
Growing stock	18.2	...	17.3	18.1	...	30.2
2- and 4-inch poor trees	4.4	...	6.5	4.3	...	...
Cull trees	11.0	...	8.5	11.0	...	16.4
All trees	44.9	...	49.0	44.4	...	53.5
Oak-hickory:						
2- and 4-inch good trees [1]	12.1	12.2	13.0	12.2	11.6	7.4
Growing stock	28.6	35.7	25.7	27.3	40.1	25.1
2- and 4-inch poor trees	4.7	3.3	5.4	5.0	3.6	2.5
Cull trees	14.0	11.2	11.3	15.6	8.8	8.9
All trees	59.4	62.4	55.4	60.1	64.1	43.9
Elm-ash-cottonwood:						
2- and 4-inch good trees [1]	6.7	4.1	8.5	3.5	4.6	12.4
Growing stock	41.2	31.6	36.5	21.3	46.0	50.2
2- and 4-inch poor trees	7.7	9.5	9.0	10.9	8.8	3.3
Cull trees	14.4	13.8	6.8	2.5	15.9	18.1
All trees	70.0	59.0	60.8	38.2	75.3	84.0
Oak-gum-cypress:						
2- and 4-inch good trees [1]	9.3	9.7	11.3	7.9	9.8	7.8
Growing stock	46.2	46.4	43.0	46.9	49.0	40.7
2- and 4-inch poor trees	6.2	7.8	2.3	3.4	6.4	4.9
Cull trees	17.6	16.8	13.0	18.8	17.4	20.0
All trees	79.3	80.7	69.6	77.0	82.6	73.4
All types:						
2- and 4-inch good trees [1]	13.8	15.1	18.3	12.2	10.3	8.1
Growing stock	39.9	47.6	43.8	28.3	47.6	37.6
2- and 4-inch poor trees	4.9	4.8	4.8	5.0	5.9	4.1
Cull trees	12.1	9.5	9.0	14.5	15.2	16.8
All trees	70.7	77.0	75.9	60.0	79.0	66.6

[1] Includes only sound, well-formed trees.

Table 12. *Total volume by class of timber and species, by Survey region, 1959*

Species	All timber [1]	Growing stock				Hardwood limbs	Cull trees
		Total growing stock	Sawtimber trees		Pole-timber trees		
			Sawlog portions	Upper stems			
	Thousand cords						
STATE OF ARKANSAS							
Softwood:							
Loblolly pine	28,882	28,835	22,811	1,388	4,636	...	47
Shortleaf pine	40,810	40,711	28,245	2,310	10,156	...	99
Other softwoods	2,969	2,681	2,004	245	432	...	288
Total	72,661	72,227	53,060	3,943	15,224	...	434
Hardwood:							
Red oaks	36,814	24,593	9,766	5,363	9,464	3,528	8,693
White oaks	36,369	25,952	9,858	4,505	11,589	3,347	7,070
Hickory	14,494	10,994	3,956	1,843	5,195	1,074	2,426
Sweetgum	16,116	13,192	5,417	2,743	5,032	546	2,378
Black and tupelo gums	7,224	5,282	2,921	1,113	1,248	382	1,560
Other hardwoods	30,771	18,706	8,171	3,438	7,097	2,631	9,434
Total	141,788	98,719	40,089	19,005	39,625	11,508	31,561
All species	214,449	170,946	93,149	22,948	54,849	11,508	31,995
SOUTHWEST							
Softwood:							
Loblolly pine	27,855	27,808	22,074	1,315	4,419	...	47
Shortleaf pine	16,391	16,360	12,488	823	3,049	...	31
Other softwoods	1,038	957	815	77	65	...	81
Total	45,284	45,125	35,377	2,215	7,533	...	159
Hardwood:							
Red oaks	14,192	9,990	3,875	2,407	3,708	1,239	2,963
White oaks	10,776	8,270	3,306	1,733	3,231	935	1,571
Hickory	4,016	3,021	1,103	703	1,215	322	673
Sweetgum	9,416	7,771	3,007	1,561	3,203	282	1,363
Black and tupelo gums	2,394	1,896	966	430	500	122	376
Other hardwoods	7,209	4,182	1,546	684	1,952	485	2,542
Total	48,003	35,130	13,803	7,518	13,809	3,385	9,488
All species	93,287	80,255	49,180	9,733	21,342	3,385	9,647
OUACHITA							
Softwood:							
Loblolly pine	424	424	318	33	73	...	...
Shortleaf pine	19,691	19,636	12,695	1,192	5,749	...	55
Other softwoods	297	241	118	23	100	...	56
Total	20,412	20,301	13,131	1,248	5,922	...	111
Hardwood:							
Red oaks	2,497	1,582	494	291	797	234	681
White oaks	5,883	4,128	1,371	573	2,184	490	1,265
Hickory	1,349	1,033	170	75	788	48	268
Sweetgum	1,476	1,178	418	217	543	41	257
Black and tupelo gums	791	470	207	103	160	39	282
Other hardwoods	1,676	860	253	116	491	91	725
Total	13,672	9,251	2,913	1,375	4,963	943	3,478
All species	34,084	29,552	16,044	2,623	10,885	943	3,589

Table 12. *Total volume by class of timber and species, by Survey region, 1959*
(Continued)

Species	All timber [1]	Growing stock				Hardwood limbs	Cull trees
		Total growing stock	Sawtimber trees		Pole-timber trees		
			Sawlog portions	Upper stems			
	Thousand cords						
OZARK							
Softwood:							
Loblolly pine	7	7	...	...	7	...	...
Shortleaf pine	4,169	4,156	2,670	269	1,217	...	13
Other softwoods	379	352	133	19	200	...	27
Total	4,555	4,515	2,803	288	1,424	...	40
Hardwood:							
Red oaks	12,614	8,184	3,239	1,545	3,400	1,194	3,236
White oaks	13,345	8,811	2,973	1,139	4,699	1,194	3,340
Hickory	4,911	3,646	1,063	440	2,143	272	993
Sweetgum	2,398	1,843	863	413	567	103	452
Black and tupelo gums	2,252	1,542	831	296	415	107	603
Other hardwoods	6,465	3,152	1,210	506	1,436	573	2,740
Total	41,985	27,178	10,179	4,339	12,660	3,443	11,364
All species	46,540	31,693	12,982	4,627	14,084	3,443	11,404
SOUTH DELTA							
Softwood:							
Loblolly pine	596	596	419	40	137	...	...
Shortleaf pine	519	519	363	24	132	...	...
Other softwoods	822	727	591	93	43	...	95
Total	1,937	1,842	1,373	157	312	...	95
Hardwood:							
Red oaks	4,971	3,343	1,479	783	1,081	548	1,080
White oaks	4,199	3,181	1,530	754	897	491	527
Hickory	3,194	2,482	1,301	505	676	354	358
Sweetgum	2,122	1,818	844	440	534	92	212
Black and tupelo gums	1,075	837	541	181	115	66	172
Other hardwoods	10,664	7,506	3,774	1,510	2,222	1,043	2,115
Total	26,225	19,167	9,469	4,173	5,525	2,594	4,464
All species	28,162	21,009	10,842	4,330	5,837	2,594	4,559
NORTH DELTA							
Softwood:							
Loblolly pine	...	...	...	...	...	...	...
Shortleaf pine	40	40	29	2	9	...	...
Other softwoods	433	404	347	33	24	...	29
Total	473	444	376	35	33	...	29
Hardwood:							
Red oaks	2,540	1,494	679	337	478	313	733
White oaks	2,166	1,562	678	306	578	237	367
Hickory	1,024	812	319	120	373	78	134
Sweetgum	704	582	285	112	185	28	94
Black and tupelo gums	712	537	376	103	58	48	127
Other hardwoods	4,757	3,006	1,388	622	996	439	1,312
Total	11,903	7,993	3,725	1,600	2,668	1,143	2,767
All species	12,376	8,437	4,101	1,635	2,701	1,143	2,796

[1] Sound volume in dead trees considered salvable is not included. This volume totals 103 thousand cords.

Table 13. *Total volume by class of timber and species, by Survey region, 1959*

Species	All timber [1]	Growing stock					
		Total growing stock	Sawtimber trees		Pole-timber trees	Hardwood limbs	Cull trees
			Sawlog portions	Upper stems			
	Million cubic feet						
STATE OF ARKANSAS							
Softwood:							
Loblolly pine	2,166.1	2,162.6	1,710.8	104.1	347.7	...	3.5
Shortleaf pine	3,060.7	3,053.3	2,118.3	173.2	761.8	...	7.4
Other softwoods	222.8	201.2	150.4	18.4	32.4	...	21.6
Total	5,449.6	5,417.1	3,979.5	295.7	1,141.9	...	32.5
Hardwood:							
Red oaks	2,466.5	1,647.7	654.3	359.4	634.0	236.4	582.4
White oaks	2,436.6	1,738.7	660.5	301.8	776.4	224.2	473.7
Hickory	971.1	736.6	265.1	123.4	348.1	71.9	162.6
Sweetgum	1,079.9	883.9	362.9	183.8	337.2	36.7	159.3
Black and tupelo gums	484.0	353.9	195.8	74.5	83.6	25.6	104.5
Other hardwoods	2,061.7	1,253.3	547.4	230.4	475.5	176.3	632.1
Total	9,499.8	6,614.1	2,686.0	1,273.3	2,654.8	771.1	2,114.6
All species	14,949.4	12,031.2	6,665.5	1,569.0	3,796.7	771.1	2,147.1
SOUTHWEST							
Softwood:							
Loblolly pine	2,089.1	2,085.6	1,655.6	98.6	331.4	...	3.5
Shortleaf pine	1,229.3	1,227.0	936.6	61.7	228.7	...	2.3
Other softwoods	77.9	71.8	61.1	5.8	4.9	...	6.1
Total	3,396.3	3,384.4	2,653.3	166.1	565.0	...	11.9
Hardwood:							
Red oaks	950.8	669.3	259.6	161.3	248.4	83.0	198.5
White oaks	722.0	554.1	221.5	116.1	216.5	62.6	105.3
Hickory	269.1	202.4	73.9	47.1	81.4	21.6	45.1
Sweetgum	630.9	520.7	201.5	104.6	214.6	18.9	91.3
Black and tupelo gums	160.4	127.0	64.7	28.8	33.5	8.2	25.2
Other hardwoods	483.0	280.2	103.6	45.8	130.8	32.5	170.3
Total	3,216.2	2,353.7	924.8	503.7	925.2	226.8	635.7
All species	6,612.5	5,738.1	3,578.1	669.8	1,490.2	226.8	647.6
OUACHITA							
Softwood:							
Loblolly pine	31.8	31.8	23.8	2.5	5.5	...	...
Shortleaf pine	1,476.8	1,472.7	952.1	89.4	431.2	...	4.1
Other softwoods	22.3	18.1	8.9	1.7	7.5	...	4.2
Total	1,530.9	1,522.6	984.8	93.6	444.2	...	8.3
Hardwood:							
Red oaks	167.3	106.0	33.1	19.5	53.4	15.7	45.6
White oaks	394.1	276.6	91.9	38.4	146.3	32.8	84.7
Hickory	90.4	69.2	11.4	5.0	52.8	3.2	18.0
Sweetgum	98.9	78.9	28.0	14.5	36.4	2.8	17.2
Black and tupelo gums	53.0	31.5	13.9	6.9	10.7	2.6	18.9
Other hardwoods	112.3	57.6	16.9	7.8	32.9	6.1	48.6
Total	916.0	619.8	195.2	92.1	332.5	63.2	233.0
All species	2,446.9	2,142.4	1,180.0	185.7	776.7	63.2	241.3

Table 13. *Total volume by class of timber and species, by Survey region, 1959*
(Continued)

Species	All timber [1]	Growing stock				Hardwood limbs	Cull trees
		Total growing stock	Sawtimber trees		Pole-timber trees		
			Sawlog portions	Upper stems			
	Million cubic feet						
OZARK							
Softwood:							
Loblolly pine	.5	.5	...	...	.5	...	...
Shortleaf pine	312.7	311.7	200.2	20.2	91.3	...	1.0
Other softwoods	28.4	26.4	10.0	1.4	15.0	...	2.0
Total	341.6	338.6	210.2	21.6	106.8	...	3.0
Hardwood:							
Red oaks	845.1	548.3	217.0	103.5	227.8	80.0	216.8
White oaks	894.1	590.3	199.2	76.3	314.8	80.0	223.8
Hickory	329.0	244.3	71.2	29.5	143.6	18.2	66.5
Sweetgum	160.7	123.5	57.8	27.7	38.0	6.9	30.3
Black and tupelo gums	150.9	103.3	55.7	19.8	27.8	7.2	40.4
Other hardwoods	433.2	211.2	81.1	33.9	96.2	38.4	183.6
Total	2,813.0	1,820.9	682.0	290.7	848.2	230.7	761.4
All species	3,154.6	2,159.5	892.2	312.3	955.0	230.7	764.4
SOUTH DELTA							
Softwood:							
Loblolly pine	44.7	44.7	31.4	3.0	10.3	...	...
Shortleaf pine	38.9	38.9	27.2	1.8	9.9	...	...
Other softwoods	61.7	54.6	44.4	7.0	3.2	...	7.1
Total	145.3	138.2	103.0	11.8	23.4	...	7.1
Hardwood:							
Red oaks	333.1	224.0	99.1	52.5	72.4	36.7	72.4
White oaks	281.3	213.1	102.5	50.5	60.1	32.9	35.3
Hickory	214.0	166.3	87.2	33.8	45.3	23.7	24.0
Sweetgum	142.2	121.8	56.5	29.5	35.8	6.2	14.2
Black and tupelo gums	72.0	56.1	36.3	12.1	7.7	4.4	11.5
Other hardwoods	714.5	502.9	252.8	101.2	148.9	69.9	141.7
Total	1,757.1	1,284.2	634.4	279.6	370.2	173.8	299.1
All species	1,902.4	1,422.4	737.4	291.4	393.6	173.8	306.2
NORTH DELTA							
Softwood:							
Loblolly pine	...	...	...	...	...	...	...
Shortleaf pine	3.0	3.0	2.2	.1	.7	...	...
Other softwoods	32.5	30.3	26.0	2.5	1.8	...	2.2
Total	35.5	33.3	28.2	2.6	2.5	...	2.2
Hardwood:							
Red oaks	170.2	100.1	45.5	22.6	32.0	21.0	49.1
White oaks	145.1	104.6	45.4	20.5	38.7	15.9	24.6
Hickory	68.6	54.4	21.4	8.0	25.0	5.2	9.0
Sweetgum	47.2	39.0	19.1	7.5	12.4	1.9	6.3
Black and tupelo gums	47.7	36.0	25.2	6.9	3.9	3.2	8.5
Other hardwoods	318.7	201.4	93.0	41.7	66.7	29.4	87.9
Total	797.5	535.5	249.6	107.2	178.7	76.6	185.4
All species	833.0	568.8	277.8	109.8	181.2	76.6	187.6

[1] Sound volume in dead trees considered salvable is not included. This volume totals 7 million cubic feet.

Table 14. *Growing stock by species and Survey region, 1959*

Species	State of Arkansas	Southwest	Ouachita	Ozark	South Delta	North Delta
	Million cubic feet					
Softwood:						
Loblolly pine	2,162.6	2,085.6	31.8	0.5	44.7	...
Shortleaf pine	3,053.3	1,227.0	1,472.7	311.7	38.9	3.0
Cypress	173.5	71.3	13.4	4.6	54.2	30.0
Cedar	27.7	.5	4.7	21.8	.4	.3
Total	5,417.1	3,384.4	1,522.6	338.6	138.2	33.3
Hardwood:						
Black, scarlet, and southern red oaks	816.7	301.9	52.0	389.0	57.7	16.1
Cherrybark, Shumard, and northern red oaks	330.1	91.6	37.1	141.8	31.1	28.5
Water oaks	500.9	275.8	16.9	17.5	135.2	55.5
White oak (**Querous alba**)	733.1	211.1	133.0	323.8	41.0	24.2
Other white oaks	1,005.6	343.0	143.6	266.5	172.1	80.4
Pecan	141.2	49.5	.8	16.4	48.1	26.4
Other hickories	595.4	152.9	68.4	227.9	118.2	28.0
Sweetgum	883.9	520.7	78.9	123.5	121.8	39.0
Black and tupelo gums	353.9	127.0	31.5	103.3	56.1	36.0
Cottonwood	69.7	7.2	1.1	...	36.4	25.0
Willow	140.4	26.4	1.6	1.7	54.1	56.6
Soft maples	46.1	18.4	3.5	8.8	14.1	1.3
Yellow-poplar	5.1	...	...	...	3.6	1.5
Sweetbay and magnolia	16.8	14.2	...	2.6	...	...
White elm	147.3	32.5	6.7	30.4	45.8	31.9
Other elms	185.5	42.0	14.9	48.3	63.7	16.6
Ash	191.5	40.8	9.3	31.3	85.7	24.4
Hackberry	180.2	22.6	2.6	13.3	124.1	17.6
Beech	32.4	20.3	...	4.0	3.4	4.7
Sycamore	51.9	10.5	5.4	14.0	20.3	1.7
Other hardwoods	186.4	45.3	12.5	56.8	51.7	20.1
Total	6,614.1	2,353.7	619.8	1,820.9	1,284.2	535.5
All species	12,031.2	5,738.1	2,142.4	2,159.5	1,422.4	568.8

Table 15. *Distribution of growing stock by species within each forest type, 1959*

Species	All types	Loblolly-shortleaf pine	Cedar	Oak-pine	Oak-hickory	Bottomland hardwood types		
						Total	Elm-ash cotton-wood	Oak-gum-cypress
	Percent							
Softwood:								
Loblolly pine	18.0	33.7	...	17.5	1.4	0.9	...	1.1
Shortleaf pine	25.4	48.9	4.2	17.9	2.5	.2	...	.2
Cypress	1.4	(1)	.8	...	(1)	5.8	1.6	6.2
Cedar	.2	(1)	19.9	(1)	.4	(1)	...	(1)
Total	45.0	82.6	24.9	35.4	4.3	6.9	1.6	7.5
Hardwood:								
Black, scarlet, and southern red oaks	6.8	3.2	2.1	12.9	20.7	1.2	...	1.3
Cherrybark, Shumard, and northern red oaks	2.7	.6	3.4	3.7	6.7	3.5	1.0	3.8
Water oaks	4.2	.8	.7	4.7	1.1	13.2	1.5	14.4
White oak (**Quercus alba**)	6.1	3.1	5.5	10.8	17.4	1.6	...	1.8
Other white oaks	8.4	3.4	30.7	10.4	15.2	11.3	1.3	12.3
Pecan	1.8	(1)	...	.2	(1)	7.1	1.8	7.6
Other hickories	4.4	1.6	11.8	5.2	12.6	2.6	...	2.9
Sweetgum	7.3	2.9	2.3	10.5	8.7	14.3	2.1	15.5
Black and tupelo gums	2.9	.9	2.5	2.5	4.9	5.5	1.5	5.9
Cottonwood	.6	(1)	...	...	(1)	2.3	19.9	.5
Willow	1.2	...	...	.1	...	4.8	38.0	1.3
Soft maples	.4	.1	...	.6	.5	.9	3.7	.6
Yellow-poplar	(1)	...	...	...	.2	...	...	...
Sweetbay and magnolia	.1	...	...	.6	.1	.3	...	.4
Elm	2.8	.4	7.8	1.0	2.7	7.9	4.1	8.3
Ash	1.6	.2	2.6	.3	.9	5.3	3.7	5.4
Hackberry	1.5	(1)	...	.1	.2	5.9	4.5	6.1
Beech	.3	.1	...	.3	.8	.2	...	.3
Sycamore	.4	(1)	1.1	.1	.5	1.3	6.8	.7
Other hardwoods	1.5	.1	4.6	.6	2.5	3.9	8.5	3.4
Total	55.0	17.4	75.1	64.6	95.7	93.1	98.4	92.5
All species	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1] Negligible.

Table 16. *Growing stock by species and stand size, by Survey region, 1959*

Species	All stand sizes	Large saw-timber	Small saw-timber	Pole-timber	Seedling and sapling	Nonstocked and other areas [1]
	Million cubic feet					
STATE OF ARKANSAS						
Softwood:						
Loblolly pine	2,162.6	1,023.2	804.2	265.3	67.6	2.3
Shortleaf pine	3,053.3	555.5	1,810.3	628.2	57.3	2.0
Other softwoods	201.2	125.6	18.3	39.6	13.4	4.3
Total	5,417.1	1,704.3	2,632.8	933.1	138.3	8.6
Hardwood:						
Red oaks	1,647.7	489.3	329.9	688.7	132.3	7.5
White oaks	1,738.7	378.3	369.2	789.9	187.2	14.1
Hickory	736.6	232.3	107.2	310.8	77.2	9.1
Sweetgum	883.9	268.0	280.9	272.7	58.0	4.3
Black and tupelo gums	353.9	155.2	69.2	102.9	25.3	1.3
Other hardwoods	1,253.3	576.0	143.9	415.3	98.2	19.9
Total	6,614.1	2,099.1	1,300.3	2,580.3	578.2	56.2
All species	12,031.2	3,803.4	3,933.1	3,513.4	716.5	64.8
SOUTHWEST						
Softwood:						
Loblolly pine	2,085.6	989.2	783.6	244.3	66.2	2.3
Shortleaf pine	1,227.0	268.5	838.8	98.4	19.7	1.6
Other softwoods	71.8	53.5	11.1	2.2	1.9	3.1
Total	3,384.4	1,311.2	1,633.5	344.9	87.8	7.0
Hardwood:						
Red oaks	669.3	273.1	170.4	195.0	28.7	2.1
White oaks	554.1	165.4	192.9	165.9	29.1	.8
Hickory	202.4	72.2	55.2	52.9	17.7	4.4
Sweetgum	520.7	184.1	164.4	132.3	37.0	2.9
Black and tupelo gums	127.0	60.9	31.6	28.6	5.4	.5
Other hardwoods	280.2	103.7	63.5	83.9	22.3	6.8
Total	2,353.7	859.4	678.0	658.6	140.2	17.5
All species	5,738.1	2,170.6	2,311.5	1,003.5	228.0	24.5
OUACHITA						
Softwood:						
Loblolly pine	31.8	14.7	7.5	9.1	.5	...
Shortleaf pine	1,472.7	271.0	778.2	398.0	25.1	.4
Other softwoods	18.1	4.8	.3	11.7	1.3	...
Total	1,522.6	290.5	786.0	418.8	26.9	.4
Hardwood:						
Red oaks	106.0	18.4	19.0	54.8	12.2	1.6
White oaks	276.6	31.7	73.5	143.7	27.1	.6
Hickory	69.2	7.0	10.4	44.1	7.7	...
Sweetgum	78.9	8.5	30.6	35.4	3.6	.8
Black and tupelo gums	31.5	5.4	8.3	13.5	3.7	.6
Other hardwoods	57.6	6.7	12.5	31.6	6.5	.3
Total	619.8	77.7	154.3	323.1	60.8	3.9
All species	2,142.4	368.2	940.3	741.9	87.7	4.3

Table 16. *Growing stock by species and stand size, by Survey region, 1959*
(Continued)

Species	All stand sizes	Large saw-timber	Small saw-timber	Pole-timber	Seedling and sapling	Nonstocked and other areas [1]
	Million cubic feet					
OZARK						
Softwood:						
Loblolly pine	.5	...	.5	...	...	...
Shortleaf pine	311.7	12.1	162.6	126.1	10.9	...
Other softwoods	26.4	3.8	.8	16.9	4.2	.7
Total	338.6	15.9	163.9	143.0	15.1	.7
Hardwood:						
Red oaks	548.3	88.2	76.3	312.9	68.8	2.1
White oaks	590.3	50.4	60.3	359.1	114.3	6.2
Hickory	244.3	38.6	18.9	143.3	43.1	.4
Sweetgum	123.5	6.8	44.4	65.2	7.1	...
Black and tupelo gums	103.3	28.6	9.1	51.8	13.8	...
Other hardwoods	211.2	44.3	21.0	99.0	38.9	8.0
Total	1,820.9	256.9	230.0	1,031.3	286.0	16.7
All species	2,159.5	272.8	393.9	1,174.3	301.1	17.4
SOUTH DELTA						
Softwood:						
Loblolly pine	44.7	19.3	12.6	11.9	.9	...
Shortleaf pine	38.9	3.9	27.9	5.6	1.5	...
Other softwoods	54.6	46.1	1.8	1.5	4.7	.5
Total	138.2	69.3	42.3	19.0	7.1	.5
Hardwood:						
Red oaks	224.0	77.9	40.4	91.1	13.1	1.5
White oaks	213.1	108.5	31.4	60.8	8.2	4.2
Hickory	166.3	100.5	10.1	45.7	6.1	3.9
Sweetgum	121.8	56.2	26.1	30.2	8.7	.6
Black and tupelo gums	56.1	32.6	16.6	5.6	1.1	.2
Other hardwoods	502.9	317.9	32.4	130.8	17.0	4.8
Total	1,284.2	693.6	157.0	364.2	54.2	15.2
All species	1,422.4	762.9	199.3	383.2	61.3	15.7
NORTH DELTA						
Softwood:						
Loblolly pine	...	...	...	...	...	...
Shortleaf pine	3.0	...	2.8	.1	.1	...
Other softwoods	30.3	17.4	4.3	7.3	1.3	...
Total	33.3	17.4	7.1	7.4	1.4	...
Hardwood:						
Red oaks	100.1	31.7	23.8	34.9	9.5	.2
White oaks	104.6	22.3	11.1	60.4	8.5	2.3
Hickory	54.4	14.0	12.6	24.8	2.6	.4
Sweetgum	39.0	12.4	15.4	9.6	1.6	...
Black and tupelo gums	36.0	27.7	3.6	3.4	1.3	...
Other hardwoods	201.4	103.4	14.5	70.0	13.5	...
Total	535.5	211.5	81.0	203.1	37.0	2.9
All species	568.8	228.9	88.1	210.5	38.4	2.9

[1] Includes areas not classified elsewhere.

Table 17. *Average volume per acre of growing stock by forest type and Survey region, 1959*

Forest type	State of Arkansas	Southwest	Ouachita	Ozark	South Delta	North Delta
			Cubic feet			
Softwood types:						
Loblolly-shortleaf pine	898	1,037	785	493	981	336
Oak-pine	462	577	331	312	517	298
Cedar	146	. . .	165	143	. . .	226
Average	763	944	717	325	856	286
Hardwood types:						
Oak-hickory	319	466	270	287	520	293
Elm-ash-cottonwood	614	460	478	280	749	692
Oak-gum-cypress	665	718	575	618	714	512
Average	445	606	325	304	686	476
All types	580	824	603	309	697	471

Table 18. *Average volume per acre of growing stock by stand size and forest type, 1959*

Forest type	All stand sizes	Large saw-timber	Small saw-timber	Pole-timber	Seedling and sapling	Nonstocked and other areas [1]
			Cubic feet			
Softwood types:						
Loblolly-shortleaf pine	898	1,421	1,167	489	161	81
Oak-pine	462	1,288	837	367	167	. . .
Cedar	146	. . .	. . .	262	113	55
Average	763	1,405	1,142	442	149	63
Hardwood types:						
Oak-hickory	319	773	760	373	129	85
Elm-ash-cottonwood	614	1,182	. . .	587	111	191
Oak-gum-cypress	665	1,152	981	465	193	173
Average	445	1,074	883	402	141	130
All types	580	1,228	1,080	416	143	113

[1] Includes areas not classified elsewhere.

Table 19. *Growing stock volume by species and county, 1959*

County	All species	Softwood			Hardwood			
		Total	Pine	Other softwoods	Total	Soft hardwoods [1]	Oaks	Other hard hardwoods [2]
				Million cubic feet				
Arkansas	213.6	8.4	...	8.4	205.2	35.4	83.9	85.9
Ashley	519.8	369.6	367.7	1.9	150.2	28.7	97.0	24.5
Baxter	95.3	16.4	15.7	.7	78.9	4.6	61.2	13.1
Benton	89.4	1.0	...	1.0	88.4	5.2	79.6	3.6
Boone	61.7	1.8	...	1.8	59.9	1.2	45.0	13.7
Bradley	329.1	192.8	183.6	9.2	136.3	34.3	81.8	20.2
Calhoun	297.9	180.9	171.7	9.2	117.0	36.7	62.9	17.4
Carroll	100.8	22.5	21.3	1.2	78.3	.4	63.2	14.7
Chicot	119.5	...	...	...	119.5	29.9	30.8	58.8
Clark	338.7	216.4	214.8	1.6	122.3	32.4	66.4	23.5
Clay	61.1	.7	...	.7	60.4	8.4	22.8	29.2
Cleburne	75.0	31.3	30.9	.4	43.7	9.4	26.7	7.6
Cleveland	260.8	135.7	134.8	.9	125.1	43.6	62.1	19.4

Table 19. *Growing stock volume by species and county, 1959*
(Continued)

County	All species	Softwood			Hardwood			
		Total	Pine	Other softwoods	Total	Soft hardwoods [1]	Oaks	Other hard hardwoods [2]
	Million cubic feet							
Columbia	167.1	102.4	102.4	...	64.7	24.2	29.0	11.5
Conway	55.8	10.5	5.5	5.0	45.3	16.8	19.0	9.5
Craighead	39.6	6.3	...	6.3	33.3	21.8	8.9	2.6
Crawford	85.4	10.2	9.6	.6	75.2	13.5	44.5	17.2
Crittenden	29.0	...	...	...	29.0	21.1	...	7.9
Cross	57.3	...	...	...	57.3	11.2	23.8	22.3
Dallas	401.9	283.3	280.7	2.6	118.6	30.4	69.8	18.4
Desha	221.0	13.6	...	13.6	207.4	26.4	49.9	131.1
Drew	381.6	178.5	157.6	20.9	203.1	56.1	113.3	33.7
Faulkner	29.8	.2	.2	...	29.6	10.5	13.3	5.8
Franklin	85.8	17.0	17.0	...	68.8	14.1	34.2	20.5
Fulton	51.6	...	...	...	51.6	3.6	39.6	8.4
Garland	241.5	167.9	167.9	...	73.6	13.4	46.7	13.5
Grant	451.5	224.1	219.8	4.3	227.4	68.0	132.5	26.9
Greene	48.2	6.1	3.0	3.1	42.1	11.1	26.1	4.9
Hempstead	203.4	96.0	96.0	...	107.4	26.7	41.8	38.9
Hot Spring	208.2	135.1	135.1	...	73.1	22.3	41.4	9.4
Howard	246.9	184.9	184.4	.5	62.0	17.0	29.9	15.1
Independence	78.0	12.7	12.7	...	65.3	2.9	44.8	17.6
Izard	60.7	10.0	7.7	2.3	50.7	2.3	36.9	11.5
Jackson	40.9	1.8	...	1.8	39.1	3.2	18.8	17.1
Jefferson	162.3	55.4	47.6	7.8	106.9	26.9	48.0	32.0
Johnson	149.7	44.3	44.0	.3	105.4	23.0	55.2	27.2
Lafayette	177.7	109.6	100.2	9.4	68.1	13.5	32.7	21.9
Lawrence	36.0	.3	...	.3	35.7	2.8	24.5	8.4
Lee	119.5	.8	...	.8	118.7	52.4	23.7	42.6
Lincoln	111.7	34.0	30.2	3.8	77.7	32.8	30.1	14.8
Little River	120.6	61.7	61.7	...	58.9	9.7	34.7	14.5
Logan	162.8	119.2	116.2	3.0	43.6	5.7	28.8	9.1
Lonoke	64.6	.4	...	.4	64.2	24.7	31.1	8.4
Madison	94.6	3.5	2.4	1.1	91.1	12.6	51.7	26.8
Marion	68.5	2.1	.6	1.5	66.4	1.3	48.0	17.1
Miller	110.7	43.1	41.9	1.2	67.6	30.5	23.1	14.0
Mississippi	52.4	9.0	...	9.0	43.4	31.3	.4	11.7
Monroe	194.8	18.1	5.8	12.3	176.7	28.2	66.8	81.7
Montgomery	306.2	231.6	231.6	...	74.6	6.5	57.6	10.5
Nevada	174.2	83.1	81.6	1.5	91.1	41.3	41.9	7.9
Newton	170.4	18.7	18.0	.7	151.7	16.3	97.4	38.0
Ouachita	297.7	136.5	130.8	5.7	161.2	68.6	76.1	16.5
Perry	215.5	180.9	180.9	...	34.6	7.8	22.5	4.3
Phillips	112.6	3.0	...	3.0	109.6	22.2	33.7	53.7
Pike	301.1	232.4	232.4	...	68.7	14.4	41.6	12.7
Poinsett	56.7	2.9	...	2.9	53.8	18.9	24.3	10.6
Polk	273.2	203.7	203.2	.5	69.5	12.1	46.2	11.2
Pope	163.8	63.3	63.3	...	100.5	27.8	55.8	16.9
Prairie	102.8	4.5	...	4.5	98.3	24.6	39.1	34.6
Pulaski	118.7	60.2	47.5	12.7	58.5	20.9	28.5	9.1
Randolph	54.1	.8	...	.8	53.3	2.0	31.0	20.3
St. Francis	63.0	...	...	...	63.0	17.5	27.4	18.1
Saline	259.4	169.8	169.8	...	89.6	23.6	41.8	24.2
Scott	293.0	224.6	224.0	.6	68.4	5.6	52.2	10.6
Searcy	85.3	6.9	6.9	...	78.4	4.4	55.8	18.2
Sebastian	25.5	8.3	7.7	.6	17.2	...	12.0	5.2
Sevier	234.5	127.9	127.1	.8	106.6	38.5	38.4	29.7
Sharp	52.8	4.9	4.2	.7	47.9	2.6	32.7	12.6
Stone	112.5	19.9	18.6	1.3	92.6	15.2	60.2	17.2
Union	514.7	290.4	288.3	2.1	224.3	87.3	107.0	30.0
Van Buren	102.7	26.7	26.0	.7	76.0	10.8	46.5	18.7
Washington	72.4	2.1	1.8	.3	70.3	3.2	49.8	17.3
White	163.4	11.8	5.8	6.0	151.6	50.1	46.5	55.0
Woodruff	84.6	6.2	...	6.2	78.4	15.2	27.7	35.5
Yell	246.6	156.4	155.7	.7	90.2	26.2	46.3	17.7
Total	12,031.2	5,417.1	5,215.9	201.2	6,614.1	1,565.8	3,386.4	1,661.9

[1] Includes cottonwood, sweetgum, yellow-poplar, and the like.
[2] Includes ash, hickory, sycamore, and the like.

Table 17. *Average volume per acre of growing stock by forest type and Survey region, 1959*

Forest type	State of Arkansas	Southwest	Ouachita	Ozark	South Delta	North Delta
			Cubic feet			
Softwood types:						
Loblolly-shortleaf pine	898	1,037	785	493	981	336
Oak-pine	462	577	331	312	517	298
Cedar	146	...	165	143	...	226
Average	763	944	717	325	856	286
Hardwood types:						
Oak-hickory	319	466	270	287	520	293
Elm-ash-cottonwood	614	460	478	280	749	692
Oak-gum-cypress	665	718	575	618	714	512
Average	445	606	325	304	686	476
All types	580	824	603	309	697	471

Table 18. *Average volume per acre of growing stock by stand size and forest type, 1959*

Forest type	All stand sizes	Large saw-timber	Small saw-timber	Pole-timber	Seedling and sapling	Nonstocked and other areas [1]
			Cubic feet			
Softwood types:						
Loblolly-shortleaf pine	898	1,421	1,167	489	161	81
Oak-pine	462	1,288	837	367	167	...
Cedar	146	...	...	262	113	55
Average	763	1,405	1,142	442	149	63
Hardwood types:						
Oak-hickory	319	773	760	373	129	85
Elm-ash-cottonwood	614	1,182	...	587	111	191
Oak-gum-cypress	665	1,152	981	465	193	173
Average	445	1,074	883	402	141	130
All types	580	1,228	1,080	416	143	113

[1] Includes areas not classified elsewhere.

Table 19. *Growing stock volume by species and county, 1959*

County	All species	Softwood			Hardwood			
		Total	Pine	Other softwoods	Total	Soft hardwoods [1]	Oaks	Other hard hardwoods [2]
				Million cubic feet				
Arkansas	213.6	8.4	...	8.4	205.2	35.4	83.9	85.9
Ashley	519.8	369.6	367.7	1.9	150.2	28.7	97.0	24.5
Baxter	95.3	16.4	15.7	.7	78.9	4.6	61.2	13.1
Benton	89.4	1.0	...	1.0	88.4	5.2	79.6	3.6
Boone	61.7	1.8	...	1.8	59.9	1.2	45.0	13.7
Bradley	329.1	192.8	183.6	9.2	136.3	34.3	81.8	20.2
Calhoun	297.9	180.9	171.7	9.2	117.0	36.7	62.9	17.4
Carroll	100.8	22.5	21.3	1.2	78.3	.4	63.2	14.7
Chicot	119.5	...	...	...	119.5	29.9	30.8	58.8
Clark	338.7	216.4	214.8	1.6	122.3	32.4	66.4	23.5
Clay	61.1	.7	...	.7	60.4	8.4	22.8	29.2
Cleburne	75.0	31.3	30.9	.4	43.7	9.4	26.7	7.6
Cleveland	260.8	135.7	134.8	.9	125.1	43.6	62.1	19.4

Table 19. *Growing stock volume by species and county, 1959*
(Continued)

County	All species	Softwood			Hardwood			
		Total	Pine	Other softwoods	Total	Soft hardwoods [1]	Oaks	Other hard hardwoods [2]
	Million cubic feet							
Columbia	167.1	102.4	102.4	...	64.7	24.2	29.0	11.5
Conway	55.8	10.5	5.5	5.0	45.3	16.8	19.0	9.5
Craighead	39.6	6.3	...	6.3	33.3	21.8	8.9	2.6
Crawford	85.4	10.2	9.6	.6	75.2	13.5	44.5	17.2
Crittenden	29.0	...	...	...	29.0	21.1	...	7.9
Cross	57.3	...	...	...	57.3	11.2	23.8	22.3
Dallas	401.9	283.3	280.7	2.6	118.6	30.4	69.8	18.4
Desha	221.0	13.6	...	13.6	207.4	26.4	49.9	131.1
Drew	381.6	178.5	157.6	20.9	203.1	56.1	113.3	33.7
Faulkner	29.8	.2	.2	...	29.6	10.5	13.3	5.8
Franklin	85.8	17.0	17.0	...	68.8	14.1	34.2	20.5
Fulton	51.6	...	...	...	51.6	3.6	39.6	8.4
Garland	241.5	167.9	167.9	...	73.6	13.4	46.7	13.5
Grant	451.5	224.1	219.8	4.3	227.4	68.0	132.5	26.9
Greene	48.2	6.1	3.0	3.1	42.1	11.1	26.1	4.9
Hempstead	203.4	96.0	96.0	...	107.4	26.7	41.8	38.9
Hot Spring	208.2	135.1	135.1	...	73.1	22.3	41.4	9.4
Howard	246.9	184.9	184.4	.5	62.0	17.0	29.9	15.1
Independence	78.0	12.7	12.7	...	65.3	2.9	44.8	17.6
Izard	60.7	10.0	7.7	2.3	50.7	2.3	36.9	11.5
Jackson	40.9	1.8	...	1.8	39.1	3.2	18.8	17.1
Jefferson	162.3	55.4	47.6	7.8	106.9	26.9	48.0	32.0
Johnson	149.7	44.3	44.0	.3	105.4	23.0	55.2	27.2
Lafayette	177.7	109.6	100.2	9.4	68.1	13.5	32.7	21.9
Lawrence	36.0	.3	...	.3	35.7	2.8	24.5	8.4
Lee	119.5	.8	...	.8	118.7	52.4	23.7	42.6
Lincoln	111.7	34.0	30.2	3.8	77.7	32.8	30.1	14.8
Little River	120.6	61.7	61.7	...	58.9	9.7	34.7	14.5
Logan	162.8	119.2	116.2	3.0	43.6	5.7	28.8	9.1
Lonoke	64.6	.4	...	.4	64.2	24.7	31.1	8.4
Madison	94.6	3.5	2.4	1.1	91.1	12.6	51.7	26.8
Marion	68.5	2.1	.6	1.5	66.4	1.3	48.0	17.1
Miller	110.7	43.1	41.9	1.2	67.6	30.5	23.1	14.0
Mississippi	52.4	9.0	...	9.0	43.4	31.3	.4	11.7
Monroe	194.8	18.1	5.8	12.3	176.7	28.2	66.8	81.7
Montgomery	306.2	231.6	231.6	...	74.6	6.5	57.6	10.5
Nevada	174.2	83.1	81.6	1.5	91.1	41.3	41.9	7.9
Newton	170.4	18.7	18.0	.7	151.7	16.3	97.4	38.0
Ouachita	297.7	136.5	130.8	5.7	161.2	68.6	76.1	16.5
Perry	215.5	180.9	180.9	...	34.6	7.8	22.5	4.3
Phillips	112.6	3.0	...	3.0	109.6	22.2	33.7	53.7
Pike	301.1	232.4	232.4	...	68.7	14.4	41.6	12.7
Poinsett	56.7	2.9	...	2.9	53.8	18.9	24.3	10.6
Polk	273.2	203.7	203.2	.5	69.5	12.1	46.2	11.2
Pope	163.8	63.3	63.3	...	100.5	27.8	55.8	16.9
Prairie	102.8	4.5	...	4.5	98.3	24.6	39.1	34.6
Pulaski	118.7	60.2	47.5	12.7	58.5	20.9	28.5	9.1
Randolph	54.1	.8	...	.8	53.3	2.0	31.0	20.3
St. Francis	63.0	...	...	...	63.0	17.5	27.4	18.1
Saline	259.4	169.8	169.8	...	89.6	23.6	41.8	24.2
Scott	293.0	224.6	224.0	.6	68.4	5.6	52.2	10.6
Searcy	85.3	6.9	6.9	...	78.4	4.4	55.8	18.2
Sebastian	25.5	8.3	7.7	.6	17.2	...	12.0	5.2
Sevier	234.5	127.9	127.1	.8	106.6	38.5	38.4	29.7
Sharp	52.8	4.9	4.2	.7	47.9	2.6	32.7	12.6
Stone	112.5	19.9	18.6	1.3	92.6	15.2	60.2	17.2
Union	514.7	290.4	288.3	2.1	224.3	87.3	107.0	30.0
Van Buren	102.7	26.7	26.0	.7	76.0	10.8	46.5	18.7
Washington	72.4	2.1	1.8	.3	70.3	3.2	49.8	17.3
White	163.4	11.8	5.8	6.0	151.6	50.1	46.5	55.0
Woodruff	84.6	6.2	...	6.2	78.4	15.2	27.7	35.5
Yell	246.6	156.4	155.7	.7	90.2	26.2	46.3	17.7
Total	12,031.2	5,417.1	5,215.9	201.2	6,614.1	1,565.8	3,386.4	1,661.9

[1] Includes cottonwood, sweetgum, yellow-poplar, and the like.
[2] Includes ash, hickory, sycamore, and the like.

Table 20. *Growing stock volume of softwood and hardwood, by diameter group and county, 1959*

County	All species	Softwood			Hardwood		
		Total	6-12 inches	14 inches and up	Total	6-12 inches	14 inches and up
	Million cubic feet						
Arkansas	213.6	8.4	1.6	6.8	205.2	73.0	132.2
Ashley	519.8	369.6	121.5	248.1	150.2	79.4	70.8
Baxter	95.3	16.4	8.0	8.4	78.9	43.1	35.8
Benton	89.4	1.0	1.0	...	88.4	52.4	36.0
Boone	61.7	1.8	1.2	.6	59.9	45.3	14.6
Bradley	329.1	192.8	95.5	97.3	136.3	63.1	73.2
Calhoun	297.9	180.9	55.3	125.6	117.0	62.7	54.3
Carroll	100.8	22.5	18.6	3.9	78.3	47.9	30.4
Chicot	119.5	...	...	...	119.5	43.7	75.8
Clark	338.7	216.4	118.9	97.5	122.3	73.5	48.8
Clay	61.1	.7	...	.7	60.4	39.8	20.6
Cleburne	75.0	31.3	28.0	3.3	43.7	27.8	15.9
Cleveland	260.8	135.7	52.0	83.7	125.1	50.1	75.0
Columbia	167.1	102.4	59.9	42.5	64.7	36.4	28.3
Conway	55.8	10.5	10.5	...	45.3	24.5	20.8
Craighead	39.6	6.3	1.5	4.8	33.3	10.8	22.5
Crawford	85.4	10.2	9.5	.7	75.2	47.3	27.9
Crittenden	29.0	...	...	...	29.0	14.1	14.9
Cross	57.3	...	...	...	57.3	31.9	25.4
Dallas	401.9	283.3	113.9	169.4	118.6	74.2	44.4
Desha	221.0	13.6	...	13.6	207.4	59.9	147.5
Drew	381.6	178.5	46.1	132.4	203.1	114.0	89.1
Faulkner	29.8	.2	.2	...	29.6	21.3	8.3
Franklin	85.8	17.0	6.8	10.2	68.8	47.3	21.5
Fulton	51.6	...	...	...	51.6	35.5	16.1
Garland	241.5	167.9	103.2	64.7	73.6	49.3	24.3
Grant	451.5	224.1	94.2	129.9	227.4	108.9	118.5
Greene	48.2	6.1	2.4	3.7	42.1	21.2	20.9
Hempstead	203.4	96.0	60.0	36.0	107.4	58.0	49.4
Hot Spring	208.2	135.1	82.7	52.4	73.1	58.8	14.3
Howard	246.9	184.9	112.1	72.8	62.0	36.1	25.9
Independence	78.0	12.7	12.7	...	65.3	34.6	30.7
Izard	60.7	10.0	10.0	...	50.7	28.0	22.7
Jackson	40.9	1.8	.7	1.1	39.1	16.8	22.3
Jefferson	162.3	55.4	23.7	31.7	106.9	68.2	38.7
Johnson	149.7	44.3	28.2	16.1	105.4	62.4	43.0
Lafayette	177.7	109.6	39.3	70.3	68.1	33.4	34.7
Lawrence	36.0	.3	.3	...	35.7	19.4	16.3
Lee	119.5	.8	.8	...	118.7	50.0	68.7

Table 20. *Growing stock volume of softwood and hardwood, by diameter group and county, 1959* (Continued)

County	All species	Softwood			Hardwood		
		Total	6-12 inches	14 inches and up	Total	6-12 inches	14 inches and up
	Million cubic feet						
Lincoln	111.7	34.0	22.8	11.2	77.7	43.6	34.1
Little River	120.6	61.7	27.2	34.5	58.9	38.5	20.4
Logan	162.8	119.2	80.8	38.4	43.6	28.4	15.2
Lonoke	64.6	.4	.4	...	64.2	33.8	30.4
Madison	94.6	3.5	3.5	...	91.1	70.2	20.9
Marion	68.5	2.1	1.7	.4	66.4	40.7	25.7
Miller	110.7	43.1	40.9	2.2	67.6	35.4	32.2
Mississippi	52.4	9.0	.6	8.4	43.4	9.4	34.0
Monroe	194.8	18.1	6.1	12.0	176.7	56.0	120.7
Montgomery	306.2	231.6	155.7	75.9	74.6	46.9	27.7
Nevada	174.2	83.1	54.0	29.1	91.1	48.2	42.9
Newton	170.4	18.7	14.6	4.1	151.7	98.2	53.5
Ouachita	297.7	136.5	77.8	58.7	161.2	99.1	62.1
Perry	215.5	180.9	118.3	62.6	34.6	26.8	7.8
Phillips	112.6	3.0	1.0	2.0	109.6	38.4	71.2
Pike	301.1	232.4	148.1	84.3	68.7	47.2	21.5
Poinsett	56.7	2.9	.3	2.6	53.8	22.4	31.4
Polk	273.2	203.7	131.3	72.4	69.5	49.7	19.8
Pope	163.8	63.3	45.2	18.1	100.5	60.4	40.1
Prairie	102.8	4.5	.7	3.8	98.3	56.0	42.3
Pulaski	118.7	60.2	43.1	17.1	58.5	38.1	20.4
Randolph	54.1	.8	...	.8	53.3	34.5	18.8
St. Francis	63.0	...	...	...	63.0	29.1	33.9
Saline	259.4	169.8	103.3	66.5	89.6	61.2	28.4
Scott	293.0	224.6	166.8	57.8	68.4	48.1	20.3
Searcy	85.3	6.9	5.4	1.5	78.4	57.3	21.1
Sebastian	25.5	8.3	7.3	1.0	17.2	12.0	5.2
Sevier	234.5	127.9	66.6	61.3	106.6	71.7	34.9
Sharp	52.8	4.9	4.9	...	47.9	26.6	21.3
Stone	112.5	19.9	10.9	9.0	92.6	55.4	37.2
Union	514.7	290.4	174.4	116.0	224.3	109.6	114.7
Van Buren	102.7	26.7	20.4	6.3	76.0	57.3	18.7
Washington	72.4	2.1	2.1	...	70.3	49.7	20.6
White	163.4	11.8	8.4	3.4	151.6	65.2	86.4
Woodruff	84.6	6.2	.8	5.4	78.4	37.6	40.8
Yell	246.6	156.4	121.8	34.6	90.2	52.5	37.7
Total	12,031.2	5,417.1	2,987.5	2,429.6	6,614.1	3,619.3	2,994.8

Table 21. *Sawtimber volume by species and county, 1959*

County	All species	Softwood			Hardwood			
		Total	Pine	Other softwoods	Total	Soft hardwoods [1]	Oaks	Other hard hardwoods [2]
	Million board feet							
Arkansas	728.1	43.3	...	43.3	684.8	131.0	287.2	266.6
Ashley	2,364.4	2,005.1	1,996.0	9.1	359.3	67.3	251.0	41.0
Baxter	286.0	79.0	77.4	1.6	207.0	3.2	176.0	27.8
Benton	225.5	...	...	...	225.5	10.2	211.5	3.8
Boone	115.2	7.3	...	7.3	107.9	...	83.8	24.1
Bradley	1,309.2	961.3	914.4	46.9	347.9	74.6	229.8	43.5
Calhoun	1,286.0	959.1	906.7	52.4	326.9	130.8	147.1	49.0
Carroll	270.0	88.0	88.0	...	182.0	...	140.7	41.3
Chicot	428.2	...	...	...	428.2	114.0	81.0	233.2
Clark	1,317.2	1,016.9	1,008.7	8.2	300.3	75.6	168.7	56.0
Clay	138.8	4.3	...	4.3	134.5	22.0	56.3	56.2
Cleburne	143.9	62.0	60.3	1.7	81.9	29.9	50.8	1.2
Cleveland	975.6	672.8	666.7	6.1	302.8	99.7	158.9	44.2
Columbia	612.7	469.0	469.0	...	143.7	56.1	73.2	14.4
Conway	146.6	20.5	9.4	11.1	126.1	50.8	53.0	22.3
Craighead	158.3	35.3	...	35.3	123.0	96.4	21.4	5.2
Crawford	199.2	42.1	40.1	2.0	157.1	29.0	92.5	35.6
Crittenden	89.1	...	...	...	89.1	78.7	...	10.4
Cross	154.1	...	...	...	154.1	30.7	72.6	50.8
Dallas	1,751.6	1,489.8	1,475.2	14.6	261.8	65.8	163.0	33.0
Desha	906.8	75.3	...	75.3	831.5	133.9	184.3	513.3
Drew	1,526.8	977.5	845.3	132.2	549.3	189.9	295.0	64.4
Faulkner	65.8	...	...	...	65.8	33.5	29.6	2.7
Franklin	222.1	85.3	85.3	...	136.8	43.2	62.4	31.2
Fulton	94.9	...	...	...	94.9	12.9	71.5	10.5
Garland	801.5	672.4	672.4	...	129.1	32.8	85.0	11.3
Grant	1,733.0	1,150.8	1,130.9	19.9	582.2	192.1	326.1	64.0
Greene	158.0	31.6	13.1	18.5	126.4	58.0	61.2	7.2
Hempstead	717.1	448.3	448.3	...	268.8	60.3	103.9	104.6
Hot Spring	640.6	547.2	547.2	...	93.4	21.7	64.7	7.0
Howard	960.9	805.4	804.3	1.1	155.5	39.6	81.5	34.4
Independence	214.9	43.5	43.5	...	171.4	3.8	140.0	27.6
Izard	146.5	13.3	13.3	...	133.2	9.2	90.8	33.2
Jackson	128.4	6.9	...	6.9	121.5	5.4	55.0	61.1
Jefferson	508.6	269.4	223.8	45.6	239.2	59.0	92.5	87.7
Johnson	466.8	209.3	209.3	...	257.5	75.7	130.6	51.2
Lafayette	780.4	572.6	528.5	44.1	207.8	49.0	108.6	50.2
Lawrence	82.0	.6	...	.6	81.4	8.0	60.9	12.5
Lee	306.2	...	...	...	306.2	118.3	76.3	111.6
Lincoln	293.7	131.4	109.6	21.8	162.3	74.7	57.8	29.8
Little River	411.8	286.1	286.1	...	125.7	14.7	76.5	34.5

Table 21. *Sawtimber volume by species and county, 1959*
(Continued)

County	All species	Softwood			Hardwood			
		Total	Pine	Other softwoods	Total	Soft hardwoods [1]	Oaks	Other hard hardwoods [2]
	Million board feet							
Logan	557.5	467.2	465.4	1.8	90.3	5.9	70.5	13.9
Lonoke	179.6	1.7	...	1.7	177.9	64.8	97.5	15.6
Madison	158.2	3.6	2.4	1.2	154.6	18.8	88.0	47.8
Marion	154.1	2.0	...	2.0	152.1	...	124.8	27.3
Miller	345.3	152.1	147.9	4.2	193.2	96.2	64.9	32.1
Mississippi	194.0	54.4	...	54.4	139.6	109.0	...	30.6
Monroe	673.5	93.6	24.0	69.6	579.9	92.2	212.3	275.4
Montgomery	1,082.0	889.8	889.8	...	192.2	14.8	141.3	36.1
Nevada	565.3	349.3	341.1	8.2	216.0	95.9	103.0	17.1
Newton	435.8	72.8	71.9	.9	363.0	59.0	239.8	64.2
Ouachita	944.6	585.2	554.0	31.2	359.4	158.3	158.6	42.5
Perry	759.5	711.1	711.1	...	48.4	13.2	31.1	4.1
Phillips	370.7	14.6	...	14.6	356.1	66.5	94.7	194.9
Pike	1,217.4	1,083.5	1,083.5	...	133.9	30.0	90.0	13.9
Poinsett	189.1	14.7	...	14.7	174.4	77.8	70.0	26.6
Polk	914.2	799.9	799.9	...	114.3	27.3	79.3	7.7
Pope	511.0	249.7	249.7	...	261.3	99.2	132.4	29.7
Prairie	301.7	25.1	...	25.1	276.6	76.9	107.2	92.5
Pulaski	339.6	235.0	191.7	43.3	104.6	40.1	55.3	9.2
Randolph	129.5	4.1	...	4.1	125.4	6.6	69.8	49.0
St. Francis	193.3	...	...	...	193.3	60.0	88.0	45.3
Saline	856.9	687.9	687.9	...	169.0	49.0	77.4	42.6
Scott	936.1	827.4	825.4	2.0	108.7	12.4	94.7	1.6
Searcy	183.6	17.3	17.3	...	166.3	7.9	118.8	39.6
Sebastian	59.4	28.9	25.4	3.5	30.5	...	20.1	10.4
Sevier	829.5	627.4	625.3	2.1	202.1	69.1	77.7	55.3
Sharp	134.3	12.1	9.9	2.2	122.2	7.6	79.5	35.1
Stone	340.5	82.6	82.6	...	257.9	47.3	170.8	39.8
Union	1,843.3	1,200.2	1,191.9	8.3	643.1	265.2	307.1	70.8
Van Buren	232.2	101.7	99.0	2.7	130.5	32.1	86.9	11.5
Washington	122.5	3.1	3.1	...	119.4	3.0	88.3	28.1
White	508.9	38.4	17.0	21.4	470.5	151.3	135.2	184.0
Woodruff	289.3	32.5	...	32.5	256.8	58.4	82.9	115.5
Yell	758.9	532.0	530.2	1.8	226.9	78.1	129.7	19.1
Total	41,177.8	24,283.6	23,320.2	963.4	16,894.2	4,395.4	8,360.3	4,138.5

[1] Includes cottonwood, sweetgum, yellow-poplar, and the like.
[2] Includes ash, hickory, sycamore, and the like.

Table 22. *Sawtimber volume of softwood and hardwood, by diameter group and county, 1959*

County	All species	Softwood			Hardwood		
		Total	10-14 inches	16 inches and up	Total	12-14 inches	16 inches and up
	Million board feet						
Arkansas	728.1	43.3	7.0	36.3	684.8	144.8	540.0
Ashley	2,364.4	2,005.1	785.0	1,220.1	359.3	147.7	211.6
Baxter	286.0	79.0	42.5	36.5	207.0	88.0	119.0
Benton	225.5	...	...	...	225.5	135.6	89.9
Boone	115.2	7.3	7.3	...	107.9	66.1	41.8
Bradley	1,309.2	961.3	573.5	387.8	347.9	131.7	216.2
Calhoun	1,286.0	959.1	354.6	604.5	326.9	142.3	184.6
Carroll	270.0	88.0	79.3	8.7	182.0	67.4	114.6
Chicot	428.2	...	...	...	428.2	145.2	283.0
Clark	1,317.2	1,016.9	634.6	382.3	300.3	174.7	125.6
Clay	138.8	4.3	...	4.3	134.5	64.3	70.2
Cleburne	143.9	62.0	56.0	6.0	81.9	38.9	43.0
Cleveland	975.6	672.8	258.3	414.5	302.8	89.8	213.0
Columbia	612.7	469.0	301.2	167.8	143.7	69.0	74.7
Conway	146.6	20.5	20.5	...	126.1	54.3	71.8
Craighead	158.3	35.3	7.9	27.4	123.0	41.4	81.6
Crawford	199.2	42.1	42.1	...	157.1	79.9	77.2
Crittenden	89.1	...	...	...	89.1	45.2	43.9
Cross	154.1	...	...	...	154.1	68.7	85.4
Dallas	1,751.6	1,489.8	894.2	595.6	261.8	138.3	123.5
Desha	906.8	75.3	4.5	70.8	831.5	171.5	660.0
Drew	1,526.8	977.5	276.6	700.9	549.3	261.8	287.5
Faulkner	65.8	...	...	...	65.8	42.1	23.7
Franklin	222.1	85.3	56.5	28.8	136.8	77.0	59.8
Fulton	94.9	...	...	...	94.9	63.6	31.3
Garland	801.5	672.4	383.9	288.5	129.1	63.1	66.0
Grant	1,733.0	1,150.8	606.2	544.6	582.2	212.6	369.6
Greene	158.0	31.6	13.1	18.5	126.4	69.8	56.6
Hempstead	717.1	448.3	327.2	121.1	268.8	112.2	156.6
Hot Spring	640.6	547.2	401.5	145.7	93.4	55.7	37.7
Howard	960.9	805.4	503.5	301.9	155.5	79.6	75.9
Independence	214.9	43.5	43.5	...	171.4	60.3	111.1
Izard	146.5	13.3	13.3	...	133.2	75.5	57.7
Jackson	128.4	6.9	3.9	3.0	121.5	41.5	80.0
Jefferson	508.6	269.4	121.1	148.3	239.2	128.6	110.6
Johnson	466.8	209.3	165.0	44.3	257.5	85.9	171.6
Lafayette	780.4	572.6	311.7	260.9	207.8	71.4	136.4
Lawrence	82.0	.6	.6	...	81.4	30.7	50.7
Lee	306.2	...	...	...	306.2	73.7	232.5

Table 22. *Sawtimber volume of softwood and hardwood, by diameter group and county, 1959* (Continued)

County	All species	Softwood			Hardwood		
		Total	10-14 inches	16 inches and up	Total	12-14 inches	16 inches and up
	Million board feet						
Lincoln	293.7	131.4	89.6	41.8	162.3	92.1	70.2
Little River	411.8	286.1	95.2	190.9	125.7	83.4	42.3
Logan	557.5	467.2	350.5	116.7	90.3	41.8	48.5
Lonoke	179.6	1.7	1.7	...	177.9	86.6	91.3
Madison	158.2	3.6	3.6	...	154.6	104.9	49.7
Marion	154.1	2.0	...	2.0	152.1	102.2	49.9
Miller	345.3	152.1	147.9	4.2	193.2	105.8	87.4
Mississippi	194.0	54.4	2.9	51.5	139.6	25.3	114.3
Monroe	673.5	93.6	23.2	70.4	579.9	149.1	430.8
Montgomery	1,082.0	889.8	658.9	230.9	192.2	123.0	69.2
Nevada	565.3	349.3	238.6	110.7	216.0	111.5	104.5
Newton	435.8	72.8	53.2	19.6	363.0	202.4	160.6
Ouachita	944.6	585.2	382.5	202.7	359.4	202.9	156.5
Perry	759.5	711.1	484.6	226.5	48.4	36.0	12.4
Phillips	370.7	14.6	3.1	11.5	356.1	149.4	206.7
Pike	1,217.4	1,083.5	796.6	286.9	133.9	74.7	59.2
Poinsett	189.1	14.7	11.4	3.3	174.4	56.2	118.2
Polk	914.2	799.9	560.2	239.7	114.3	64.7	49.6
Pope	511.0	249.7	205.6	44.1	261.3	148.4	112.9
Prairie	301.7	25.1	1.6	23.5	276.6	119.3	157.3
Pulaski	339.6	235.0	182.6	52.4	104.6	52.5	52.1
Randolph	129.5	4.1	4.1	...	125.4	76.4	49.0
St. Francis	193.3	...	...	...	193.3	80.8	112.5
Saline	856.9	687.9	394.0	293.9	169.0	101.0	68.0
Scott	936.1	827.4	570.5	256.9	108.7	47.0	61.7
Searcy	183.6	17.3	9.5	7.8	166.3	106.6	59.7
Sebastian	59.4	28.9	28.9	...	30.5	11.9	18.6
Sevier	829.5	627.4	337.2	290.2	202.1	108.9	93.2
Sharp	134.3	12.1	12.1	...	122.2	69.7	52.5
Stone	340.5	82.6	42.7	39.9	257.9	107.4	150.5
Union	1,843.3	1,200.2	690.1	510.1	643.1	238.8	404.3
Van Buren	232.2	101.7	88.6	13.1	130.5	63.9	66.6
Washington	122.5	3.1	3.1	...	119.4	62.4	57.0
White	508.9	38.4	16.9	21.5	470.5	201.0	269.5
Woodruff	289.3	32.5	8.1	24.4	256.8	98.9	157.9
Yell	758.9	532.0	410.0	122.0	226.9	116.8	110.1
Total	41,177.8	24,283.6	14,205.4	10,078.2	16,894.2	7,333.6	9,560.6

Table 23. *Sawtimber volume by species and tree diameter, by Survey region, 1959*

Species	All diameter classes	10-12 inches [1]	14-18 inches	20-24 inches	26 inches and up
			Million board feet		
			STATE OF ARKANSAS		
Softwood:					
Loblolly pine	10,686.0	2,870.0	5,441.1	2,108.6	266.3
Shortleaf pine	12,634.2	6,418.1	5,502.6	689.7	23.8
Other softwoods	963.4	153.9	295.1	250.7	263.7
Total	24,283.6	9,442.0	11,238.8	3,049.0	553.8
Hardwood:					
Red oaks	4,201.9	963.0	2,064.6	873.6	300.7
White oaks	4,158.4	1,027.5	2,240.0	642.3	248.6
Hickory	1,654.4	396.1	735.3	350.6	172.4
Sweetgum	2,232.6	578.6	1,187.4	325.7	140.9
Black and tupelo gums	1,203.7	174.0	627.8	322.3	79.6
Other hardwoods	3,443.2	650.9	1,716.8	786.2	289.3
Total	16,894.2	3,790.1	8,571.9	3,300.7	1,231.5
All species	41,177.8	13,232.1	19,810.7	6,349.7	1,785.3
			SOUTHWEST		
Softwood:					
Loblolly pine	10,344.8	2,760.4	5,284.9	2,042.0	257.5
Shortleaf pine	5,626.2	2,750.8	2,599.6	267.1	8.7
Other softwoods	388.6	74.7	128.0	115.0	70.9
Total	16,359.6	5,585.9	8,012.5	2,424.1	337.1
Hardwood:					
Red oaks	1,658.3	404.6	823.5	345.2	85.0
White oaks	1,391.0	321.8	729.3	244.4	95.5
Hickory	457.6	90.8	223.6	115.1	28.1
Sweetgum	1,237.3	315.9	706.8	183.2	31.4
Black and tupelo gums	397.7	50.3	184.5	115.1	47.8
Other hardwoods	631.2	184.8	293.6	130.5	22.3
Total	5,773.1	1,368.2	2,961.3	1,133.5	310.1
All species	22,132.7	6,954.1	10,973.8	3,557.6	647.2
			OUACHITA		
Softwood:					
Loblolly pine	144.8	45.8	67.3	29.4	2.3
Shortleaf pine	5,654.4	2,874.7	2,362.7	401.9	15.1
Other softwoods	52.4	21.9	16.1	4.9	9.5
Total	5,851.6	2,942.4	2,446.1	436.2	26.9
Hardwood:					
Red oaks	218.5	46.7	117.7	39.0	15.1
White oaks	565.9	131.7	356.0	74.7	3.5
Hickory	66.6	27.2	37.6	1.8	...
Sweetgum	165.0	50.2	95.4	15.2	4.2
Black and tupelo gums	83.4	17.2	45.0	21.2	...
Other hardwoods	114.6	49.8	43.7	21.1	...
Total	1,214.0	322.8	695.4	173.0	22.8
All species	7,065.6	3,265.2	3,141.5	609.2	49.7

Table 23. *Sawtimber volume by species and tree diameter, by Survey region, 1959* (Continued)

Species	All diameter classes	10-12 inches [1]	14-18 inches	20-24 inches	26 inches and up
	Million board feet				
OZARK					
Softwood:					
Loblolly pine	...	...	...	...	...
Shortleaf pine	1,179.5	694.3	468.9	16.3	...
Other softwoods	58.2	27.8	15.7	14.7	...
Total	1,237.7	722.1	484.6	31.0	...
Hardwood:					
Red oaks	1,380.3	336.9	712.6	308.4	22.4
White oaks	1,287.2	418.1	723.8	122.1	23.2
Hickory	421.7	145.4	227.6	37.3	11.4
Sweetgum	356.6	89.7	197.2	49.5	20.2
Black and tupelo gums	334.9	61.6	203.5	57.5	12.3
Other hardwoods	489.6	109.3	255.9	95.6	28.8
Total	4,270.3	1,161.0	2,320.6	670.4	118.3
All species	5,508.0	1,883.1	2,805.2	701.4	118.3
SOUTH DELTA					
Softwood:					
Loblolly pine	196.4	63.8	88.9	37.2	6.5
Shortleaf pine	161.0	94.4	62.2	4.4	...
Other softwoods	297.0	14.3	58.6	61.2	162.9
Total	654.4	172.5	209.7	102.8	169.4
Hardwood:					
Red oaks	652.5	113.2	285.6	110.1	143.6
White oaks	638.3	82.8	293.3	155.2	107.0
Hickory	585.4	92.5	192.8	169.2	130.9
Sweetgum	360.1	79.2	129.0	66.8	85.1
Black and tupelo gums	221.6	34.6	90.2	80.2	16.6
Other hardwoods	1,584.8	228.0	765.7	392.2	198.9
Total	4,042.7	630.3	1,756.6	973.7	682.1
All species	4,697.1	802.8	1,966.3	1,076.5	851.5
NORTH DELTA					
Softwood:					
Loblolly pine	...	...	...	...	...
Shortleaf pine	13.1	3.9	9.2	...	...
Other softwoods	167.2	15.2	76.7	54.9	20.4
Total	180.3	19.1	85.9	54.9	20.4
Hardwood:					
Red oaks	292.3	61.6	125.2	70.9	34.6
White oaks	276.0	73.1	137.6	45.9	19.4
Hickory	123.1	40.2	53.7	27.2	2.0
Sweetgum	113.6	43.6	59.0	11.0	...
Black and tupelo gums	166.1	10.3	104.6	48.3	2.9
Other hardwoods	623.0	79.0	357.9	146.8	39.3
Total	1,594.1	307.8	838.0	350.1	98.2
All species	1,774.4	326.9	923.9	405.0	118.6

[1] Hardwood sawtimber volume was not tallied in trees under 11.0 inches d.b.h.

Table 24. *Sawtimber volume by species and stand size, by Survey region, 1959*

Species	All stand sizes	Large sawtimber	Small sawtimber	Poletimber	Seedling and sapling	Nonstocked and other areas [1]
	Million board feet					
STATE OF ARKANSAS						
Softwood:						
Loblolly pine	10,686.0	6,029.5	3,767.1	663.5	218.8	7.1
Shortleaf pine	12,634.2	3,037.1	7,843.2	1,541.7	203.0	9.2
Other softwoods	963.4	700.4	92.3	106.0	44.1	20.6
Total	24,283.6	9,767.0	11,702.6	2,311.2	465.9	36.9
Hardwood:						
Red oaks	4,201.9	1,688.8	883.6	1,252.9	356.2	20.4
White oaks	4,158.4	1,356.4	945.3	1,331.6	475.5	49.6
Hickory	1,654.4	874.3	209.5	407.5	135.4	27.7
Sweetgum	2,232.6	901.5	737.4	455.1	131.2	7.4
Black and tupelo gums	1,203.7	630.1	212.6	293.8	63.0	4.2
Other hardwoods	3,443.2	2,055.0	363.7	757.4	207.6	59.5
Total	16,894.2	7,506.1	3,352.1	4,498.3	1,368.9	168.8
All species	41,177.8	17,273.1	15,054.7	6,809.5	1,834.8	205.7
SOUTHWEST						
Softwood:						
Loblolly pine	10,344.8	5,839.2	3,669.1	614.4	215.0	7.1
Shortleaf pine	5,626.2	1,485.6	3,893.4	183.4	56.6	7.2
Other softwoods	388.6	292.9	59.4	11.0	4.7	20.6
Total	16,359.6	7,617.7	7,621.9	808.8	276.3	34.9
Hardwood:						
Red oaks	1,658.3	862.9	378.2	344.0	65.7	7.5
White oaks	1,391.0	541.7	482.3	292.5	72.5	2.0
Hickory	457.6	223.6	107.7	73.0	39.8	13.5
Sweetgum	1,237.3	602.1	378.3	171.2	81.0	4.7
Black and tupelo gums	397.7	239.7	79.3	67.1	9.3	2.3
Other hardwoods	631.2	285.0	129.7	153.7	45.5	17.3
Total	5,773.1	2,755.0	1,555.5	1,101.5	313.8	47.3
All species	22,132.7	10,372.7	9,177.4	1,910.3	590.1	82.2
OUACHITA						
Softwood:						
Loblolly pine	144.8	81.5	38.7	22.4	2.2	..
Shortleaf pine	5,654.4	1,462.8	3,063.3	1,030.2	96.1	2.0
Other softwoods	52.4	27.0	...	23.6	1.8	...
Total	5,851.6	1,571.3	3,102.0	1,076.2	100.1	2.0
Hardwood:						
Red oaks	218.5	63.6	30.7	93.9	26.6	3.7
White oaks	565.9	83.4	168.5	245.6	66.8	1.6
Hickory	66.6	13.0	9.3	33.3	11.0	..
Sweetgum	165.0	23.6	72.4	59.4	8.3	1.3
Black and tupelo gums	83.4	20.1	21.5	27.3	12.6	1.9
Other hardwoods	114.6	19.6	27.1	49.1	17.6	1.2
Total	1,214.0	223.3	329.5	508.6	142.9	9.7
All species	7,065.6	1,794.6	3,431.5	1,584.8	243.0	11.7

Table 24. *Sawtimber volume by species and stand size, by Survey region, 1959* (Continued)

Species	All stand sizes	Large sawtimber	Small sawtimber	Poletimber	Seedling and sapling	Nonstocked and other areas [1]
	Million board feet					
OZARK						
Softwood:						
Loblolly pine	...	...	...	...	...	...
Shortleaf pine	1,179.5	67.7	760.2	310.3	41.3	...
Other softwoods	58.2	21.5	4.3	28.3	4.1	...
Total	1,237.7	89.2	764.5	338.6	45.4	...
Hardwood:						
Red oaks	1,380.3	337.0	272.8	566.7	199.9	3.9
White oaks	1,287.2	249.1	161.8	548.1	303.0	25.2
Hickory	421.7	143.7	37.6	171.6	68.8	...
Sweetgum	356.6	29.6	161.7	146.4	18.9	...
Black and tupelo gums	334.9	96.0	26.0	177.8	35.1	...
Other hardwoods	489.6	166.2	53.0	167.2	72.0	31.2
Total	4,270.3	1,021.6	712.9	1,777.8	697.7	60.3
All species	5,508.0	1,110.8	1,477.4	2,116.4	743.1	60.3
SOUTH DELTA						
Softwood:						
Loblolly pine	196.4	108.8	59.3	26.7	1.6	...
Shortleaf pine	161.0	21.0	113.9	17.8	8.3	...
Other softwoods	297.0	257.6	6.5	5.4	27.5	...
Total	654.4	387.4	179.7	49.9	37.4	...
Hardwood:						
Red oaks	652.5	307.7	131.8	176.0	32.2	4.8
White oaks	638.3	402.2	100.1	111.0	12.1	12.9
Hickory	585.4	453.9	18.7	92.2	8.9	11.7
Sweetgum	360.1	212.8	72.5	50.4	23.0	1.4
Black and tupelo gums	221.6	148.1	58.9	11.9	2.7	...
Other hardwoods	1,584.8	1,170.6	108.8	257.2	38.4	9.8
Total	4,042.7	2,695.3	490.8	698.7	117.3	40.6
All species	4,697.1	3,082.7	670.5	748.6	154.7	40.6
NORTH DELTA						
Softwood:						
Loblolly pine	...	...	...	...	...	...
Shortleaf pine	13.1	...	12.4	...	.7	...
Other softwoods	167.2	101.4	22.1	37.7	6.0	...
Total	180.3	101.4	34.5	37.7	6.7	...
Hardwood:						
Red oaks	292.3	117.6	70.1	72.3	31.8	.5
White oaks	276.0	80.0	32.6	134.4	21.1	7.9
Hickory	123.1	40.1	36.2	37.4	6.9	2.5
Sweetgum	113.6	33.4	52.5	27.7	...	...
Black and tupelo gums	166.1	126.2	26.9	9.7	3.3	...
Other hardwoods	623.0	413.6	45.1	130.2	34.1	...
Total	1,594.1	810.9	263.4	411.7	97.2	10.9
All species	1,774.4	912.3	297.9	449.4	103.9	10.9

[1] Includes areas not classified elsewhere.

Table 25. *Sawtimber volume by species and Survey region, 1959*

Species	State of Arkansas	Southwest	Ouachita	Ozark	South Delta	North Delta
			Million board feet			
Softwood:						
Loblolly pine	10,686.0	10,344.8	144.8	...	196.4	...
Shortleaf pine	12,634.2	5,626.2	5,654.4	1,179.5	161.0	13.1
Cypress	920.1	387.5	43.4	25.6	297.0	166.6
Cedar	43.3	1.1	9.0	32.6	...	.6
Total	24,283.6	16,359.6	5,851.6	1,237.7	654.4	180.3
Hardwood:						
Black, scarlet, and southern red oaks	1,851.6	633.6	100.8	934.1	135.7	47.4
Cherrybark, Shumard, and northern red oaks	936.5	293.4	71.4	388.4	89.5	93.8
Water oaks	1,413.8	731.3	46.3	57.8	427.3	151.1
White oak (**Quercus alba**)	1,733.8	529.3	278.0	742.7	109.8	74.0
Other white oaks	2,424.6	861.7	287.9	544.5	528.5	202.0
Pecan	391.5	160.0	...	61.1	92.6	77.8
Other hickories	1,262.9	297.6	66.6	360.6	492.8	45.3
Sweetgum	2,232.6	1,237.3	165.0	356.6	360.1	113.6
Black and tupelo gums	1,203.7	397.7	83.4	334.9	221.6	166.1
Cottonwood	291.8	29.5	5.7	..	141.6	115.0
Willow	458.6	109.8	5.9	7.1	136.2	199.6
Soft maples	81.5	30.7	..	7.9	41.4	1.5
Yellow-poplar	15.8	...	...	...	10.0	5.8
Sweetbay and magnolia	23.5	19.2	..	4.3	...	...
White elm	423.8	68.2	6.9	88.6	154.1	106.0
Other elms	433.8	65.9	19.8	97.5	205.3	45.3
Ash	531.3	81.5	32.6	64.9	291.6	60.7
Hackberry	549.8	58.2	2.3	44.8	405.2	39.3
Beech	99.7	62.4	...	10.8	12.2	14.3
Sycamore	190.2	36.1	13.3	41.1	97.5	2.2
Other hardwoods	343.4	69.7	28.1	122.6	89.7	33.3
Total	16,894.2	5,773.1	1,214.0	4,270.3	4,042.7	1,594.1
All species	41,177.8	22,132.7	7,065.6	5,508.0	4,697.1	1,774.4

Table 26. *Average sawtimber volume per acre by forest type and Survey region, 1959*

Forest type	State of Arkansas	Southwest	Ouachita	Ozark	South Delta	North Delta
			Board feet			
Softwood types:						
Loblolly-shortleaf pine	3,677	4,559	2,786	1,698	3,854	1,200
Oak-pine	1,327	1,706	901	841	1,299	979
Cedar	291	...	416	276	...	508
Average	2,993	3,982	2,509	984	3,165	891
Hardwood types:						
Oak-hickory	710	994	552	652	1,181	725
Elm-ash-cottonwood	2,129	1,564	1,236	1,226	2,435	2,682
Oak-gum-cypress	2,149	2,229	1,501	2,128	2,446	1,588
Average	1,244	1,705	722	729	2,244	1,484
All types	1,984	3,180	1,989	787	2,301	1,469

Table 27. *Average sawtimber volume per acre by stand size and forest type, 1959*

Forest type	All stand sizes	Large sawtimber	Small sawtimber	Poletimber	Seedling and sapling	Nonstocked and other areas [1]
	Board feet					
Softwood types:						
Loblolly-shortleaf pine	3,677	7,404	4,762	1,052	414	225
Oak-pine	1,327	5,128	2,611	733	433	. . .
Cedar	291	. . .	. . .	478	241	. . .
Average	2,993	7,127	4,599	931	369	164
Hardwood types:						
Oak-hickory	710	2,832	2,316	645	324	227
Elm-ash-cottonwood	2,129	5,074	. . .	963	267	560
Oak-gum-cypress	2,149	4,543	2,934	978	545	649
Average	1,244	4,229	2,660	741	367	425
All types	1,984	5,578	4,132	806	367	358

[1] Includes areas not classified elsewhere.

Table 28. *Softwood sawtimber volume by log grade and stand quality, by species group, and by Survey region, 1959*

Species group and Survey region	All grades	Grade 1 [1]	Grade 2	Grade 3			Grade 4		
				Total	In fair and better stands	In poor stands	Total	In fair and better stands	In poor stands
	Million board feet								
Species group:									
Loblolly pine	10,686.0	414.0	1,906.5	3,659.5	2,300.6	1,358.9	4,706.0	2,559.4	2,146.6
Shortleaf pine	12,634.2	130.7	1,820.1	4,547.0	2,013.4	2,533.6	6,136.4	2,765.5	3,370.9
Other softwoods	963.4	124.0	115.9	220.0	163.5	56.5	503.5	286.4	217.1
Total	24,283.6	668.7	3,842.5	8,426.5	4,477.5	3,949.0	11,345.9	5,611.3	5,734.6
Survey region:									
Southwest	16,359.6	492.8	2,829.4	5,931.9	3,607.3	2,324.6	7,105.5	3,991.6	3,113.9
Ouachita	5,851.6	87.2	789.0	1,971.0	673.5	1,297.5	3,004.4	1,221.8	1,782.6
Ozark	1,237.7	39.0	134.7	327.9	104.9	223.0	736.1	173.3	562.8
South Delta	654.4	49.1	79.2	165.2	84.7	80.5	360.9	173.5	187.4
North Delta	180.3	.6	10.2	30.5	7.1	23.4	139.0	51.1	87.9
Total	24,283.6	668.7	3,842.5	8,426.5	4,477.5	3,949.0	11,345.9	5,611.3	5,734.6

[1] All cedar sawlogs were graded as No. 1.

Table 29. *Hardwood sawtimber volume by log class and stand quality, by species group, and by Survey region, 1959*

Species group and Survey region	All classes	Standard lumber logs					Tie and timber logs		
		Grade 1	Grade 2	Grade 3					
				Total	In fair and better stands	In poor stands	Total	In fair and better stands	In poor stands
	Million board feet								
Species group:									
Red oaks	4,201.9	242.4	664.3	2,157.8	579.5	1,578.3	1,137.4	322.2	815.2
White oaks	4,158.4	207.1	747.3	2,682.5	650.5	2,032.0	521.5	163.1	358.4
Hickory	1,654.4	168.9	258.9	852.4	303.8	548.6	374.2	158.0	216.2
Sweetgum	2,232.6	136.3	369.0	1,200.7	460.2	740.5	526.6	215.9	310.7
Black and tupelo gums	1,203.7	155.2	332.7	635.8	297.4	338.4	80.0	41.4	38.6
Other hardwoods	3,443.2	201.9	707.4	1,944.0	883.4	1,060.6	589.9	236.2	353.7
Total	16,894.2	1,111.8	3,079.6	9,473.2	3,174.8	6,298.4	3,229.6	1,136.8	2,092.8
Survey region:									
Southwest	5,773.1	393.5	1,055.9	2,911.7	1,322.8	1,588.9	1,412.0	591.4	820.6
Ouachita	1,214.0	35.0	205.2	760.1	156.0	604.1	213.7	24.0	189.7
Ozark	4,270.3	242.0	770.8	2,824.9	490.7	2,334.2	432.6	69.7	362.9
South Delta	4,042.7	360.7	796.7	1,982.2	911.2	1,071.0	903.1	408.9	494.2
North Delta	1,594.1	80.6	251.0	994.3	294.1	700.2	268.2	42.8	225.4
Total	16,894.2	1,111.8	3,079.6	9,473.2	3,174.8	6,298.4	3,229.6	1,136.8	2,092.8

Table 30. *Annual cut of growing stock and sawtimber by species group and county,[1] 1958*

County	Growing stock			Sawtimber		
	All Species	Softwood	Hardwood	All Species	Softwood	Hardwood
	—*Million cubic feet* —			— *Million board feet* —		
Arkansas	2.9	1.2	1.7	11.5	4.5	7.0
Ashley	16.9	9.8	7.1	63.3	40.6	22.7
Baxter	6.8	...	6.8	21.9	...	21.9
Benton and Carroll	3.0	2.4	.6	12.4	10.1	2.3
Boone and Marion	.3	...	.3	1.0	...	1.0
Bradley	16.5	12.2	4.3	62.9	44.3	18.6
Calhoun	10.0	8.0	2.0	40.5	32.5	8.0
Chicot	.7	...	.7	1.6	...	1.6
Clark	14.7	9.9	4.8	55.1	39.8	15.3
Clay	.5	...	.5	1.4	...	1.4
Cleburne	1.0	.2	.8	1.3	.5	.8
Cleveland	5.4	2.4	3.0	21.5	9.6	11.9
Columbia	7.2	5.0	2.2	23.4	17.0	6.4
Conway	.6	.4	.2	1.6	.7	.9
Craighead	1.2	...	1.2	3.7	...	3.7
Crawford	.7	.1	.6	2.4	...	2.4
Crittenden	.1	...	.1	...	...	...
Cross	6.3	...	6.3	18.6	...	18.6
Dallas	14.3	8.5	5.8	50.3	33.4	16.9
Desha	1.7	.3	1.4	7.5	1.2	6.3
Drew	14.2	3.2	11.0	47.6	11.8	35.8
Faulkner	.1	...	.1	.5	...	.5
Franklin	2.9	...	2.9	8.8	...	8.8
Fulton	.3	...	.3	.4	...	.4
Garland	6.0	2.7	3.3	25.8	12.9	12.9
Grant	15.9	10.6	5.3	58.2	39.3	18.9
Greene	3.2	...	3.2	9.6	...	9.6
Hempstead	4.7	2.9	1.8	16.3	11.4	4.9
Hot Spring	7.9	5.3	2.6	25.0	15.5	9.5
Howard	9.7	7.8	1.9	37.7	30.0	7.7
Independence	4.9	.3	4.6	19.0	.3	18.7
Izard	.4	.1	.3	1.7	.2	1.5
Jackson	1.3	...	1.3	3.9	...	3.9
Jefferson	5.1	2.5	2.6	19.5	9.9	9.6
Johnson	4.0	3.6	.4	22.4	21.4	1.0
Lafayette	5.2	3.6	1.6	22.7	18.0	4.7
Lawrence	2.5	...	2.5	7.5	...	7.5
Lee	1.2	...	1.2	4.2	...	4.2
Lincoln	2.1	.5	1.6	6.8	.7	6.1

Table 30. *Annual cut of growing stock and sawtimber by species group and county,*[1] *1958*
(Continued)

County	Growing stock			Sawtimber		
	All Species	Softwood	Hardwood	All Species	Softwood	Hardwood
	—*Million cubic feet* —			— *Million board feet* —		
Little River	4.3	1.0	3.3	15.8	2.8	13.0
Logan	3.4	1.4	2.0	11.0	5.3	5.7
Lonoke	4.5	...	4.5	17.3	...	17.3
Madison and Washington	.3	...	.3	1.1	...	1.1
Miller	3.2	1.8	1.4	7.7	2.2	5.5
Mississippi and Poinsett	2.7	1.5	1.2	10.3	6.9	3.4
Monroe	10.7	.7	10.0	39.8	2.8	37.0
Montgomery	7.9	4.4	3.5	22.0	9.7	12.3
Nevada	2.9	1.6	1.3	10.6	5.4	5.2
Newton and Searcy	8.1	...	8.1	31.5	...	31.5
Ouachita	7.0	4.2	2.8	25.5	15.8	9.7
Perry	4.0	2.4	1.6	9.4	4.2	5.2
Phillips	2.4	...	2.4	9.0	...	9.0
Pike	8.9	5.7	3.2	34.3	22.5	11.8
Polk	5.9	3.2	2.7	23.7	15.1	8.6
Pope	3.4	2.6	.8	6.6	4.0	2.6
Prairie	2.4	...	2.4	8.7	...	8.7
Pulaski	2.9	2.7	.2	11.9	11.4	.5
Randolph	1.0	...	1.0	2.5	...	2.5
St. Francis	.8	...	.8	2.2	...	2.2
Saline	10.6	8.7	1.9	46.1	39.6	6.5
Scott	8.6	5.9	2.7	37.7	28.9	8.8
Sebastian	.9	.9	...	2.7	2.7	...
Sevier	8.4	5.7	2.7	29.1	20.6	8.5
Sharp	1.3	1.3	...	3.6	3.6	...
Stone	4.7	1.9	2.8	26.5	15.2	11.3
Union	36.7	24.1	12.6	132.2	85.7	46.5
Van Buren	.7	.4	.3	4.1	3.0	1.1
White	3.9	.4	3.5	11.0	.4	10.6
Woodruff	2.3	...	2.3	6.4	...	6.4
Yell	10.6	7.2	3.4	48.2	36.1	12.1
All counties	377.8	193.2	184.6	1,388.0	749.5	638.5

[1] For use of county data, groupings of at least 50 million cubic feet are recommended.

Table 31. *Annual cut of sawtimber and growing stock by species group and class of timber, by Survey region, 1958*

Class of timber	Growing stock			Sawtimber		
	All species	Softwood	Hardwood	All species	Softwood	Hardwood
	— *Million cubic feet* —			— *Million board feet* —		
STATE OF ARKANSAS						
Sawtimber trees	281.6	144.4	137.2	1,388.0	749.5	638.5
Poletimber trees	96.2	48.8	47.4	...	...	...
Total	377.8	193.2	184.6	1,388.0	749.5	638.5
SOUTHWEST						
Sawtimber trees	158.8	97.4	61.4	779.7	498.2	281.5
Poletimber trees	55.2	35.9	19.3	...	...	...
Total	214.0	133.3	80.7	779.7	498.2	281.5
OUACHITA						
Sawtimber trees	46.5	31.0	15.5	238.5	165.9	72.6
Poletimber trees	14.3	8.5	5.8	...	...	...
Total	60.8	39.5	21.3	238.5	165.9	72.6
OZARK						
Sawtimber trees	36.9	11.0	25.9	180.3	59.4	120.9
Poletimber trees	11.5	2.7	8.8	...	...	...
Total	48.4	13.7	34.7	180.3	59.4	120.9
SOUTH DELTA						
Sawtimber trees	26.1	3.8	22.3	125.9	19.1	106.8
Poletimber trees	7.6	1.4	6.2	...	...	...
Total	33.7	5.2	28.5	125.9	19.1	106.8
NORTH DELTA						
Sawtimber trees	13.3	1.2	12.1	63.6	6.9	56.7
Poletimber trees	7.6	.3	7.3	...	...	...
Total	20.9	1.5	19.4	63.6	6.9	56.7

Table 32. *Annual cut of sawtimber and growing stock by species, 1958*

Species	Growing stock	Sawtimber
	Million cubic feet	*Million board feet*
Softwood:		
Pines	188.2	728.6
Other softwoods	5.0	20.9
Total	193.2	749.5
Hardwood:		
Red oaks	81.0	298.6
White oaks	58.0	192.1
Hickory	7.9	25.6
Other hard hardwoods	12.0	39.4
Black and tupelo gums	4.5	16.7
Sweetgum	19.0	59.4
Other soft hardwoods	2.2	6.7
Total	184.6	638.5
All species	377.8	1,388.0

Table 33. *Net annual growth of sawtimber and growing stock by species group and class of timber, by Survey region, 1958*

Class of timber	Growing stock			Sawtimber		
	All species	Softwood	Hardwood	All species	Softwood	Hardwood
	— *Million cubic feet* —			— *Million board feet* —		
STATE OF ARKANSAS						
Sawtimber trees	470.3	288.5	181.8	2,399.7	1,635.6	764.1
Poletimber trees	166.9	51.6	115.3	...	...	...
Total	637.2	340.1	297.1	2,399.7	1,635.6	764.1
SOUTHWEST						
Sawtimber trees	264.8	192.4	72.4	1,422.7	1,133.4	289.3
Poletimber trees	74.8	32.1	42.7	...	...	...
Total	339.6	224.5	115.1	1,422.7	1,133.4	289.3
OUACHITA						
Sawtimber trees	78.1	67.7	10.4	400.0	358.4	41.6
Poletimber trees	29.5	13.2	16.3	...	...	...
Total	107.6	80.9	26.7	400.0	358.4	41.6
OZARK						
Sawtimber trees	58.3	19.8	38.5	263.5	98.5	165.0
Poletimber trees	36.1	4.5	31.6	...	...	...
Total	94.4	24.3	70.1	263.5	98.5	165.0
SOUTH DELTA						
Sawtimber trees	46.9	7.1	39.8	210.0	35.6	174.4
Poletimber trees	18.7	1.7	17.0	...	...	...
Total	65.6	8.8	56.8	210.0	35.6	174.4
NORTH DELTA						
Sawtimber trees	22.2	1.5	20.7	103.5	9.7	93.8
Poletimber trees	7.8	.1	7.7	...	...	...
Total	30.0	1.6	28.4	103.5	9.7	93.8

Table 34. *Net annual growth per acre of sawtimber and growing stock, by forest-type group and Survey region, 1958*

Survey region	Growing stock			Sawtimber		
	All types	Softwood types	Hardwood types	All types	Softwood types	Hardwood types
	— — *Cubic feet* — —			— — *Board feet* — —		
Southwest	49	59	31	204	265	93
Ouachita	30	37	15	113	146	32
Ozark	13	18	12	38	65	30
South Delta	32	67	30	103	242	94
North Delta	25	16	25	86	55	86
Average	31	45	20	116	193	59

Table 35. *Number of growing stock trees by species group and Survey region (1959) and change since 1951*

Diameter class (inches)	Softwood		Hardwood	
	Thousand trees	Percent change	Thousand trees	Percent change
STATE OF ARKANSAS				
2-4	1,702,358	+ 35	6,067,171	+ 24
6-8	441,184	+ 29	785,147	+ 28
10-12	150,335	+ 27	255,408	+ 5
14-18	54,493	+ 28	100,646	− 14
20 and up	6,496	+ 71	18,563	− 5
Total	2,354,866	+ 33	7,226,935	+ 23
SOUTHWEST				
2-4	890,855	+ 51	2,114,227	+ 55
6-8	202,801	+ 26	237,367	+ 23
10-12	79,733	+ 17	83,880	+ 3
14-18	36,246	+ 30	33,640	− 12
20 and up	4,797	+ 78	5,768	− 2
Total	1,214,432	+ 43	2,474,882	+ 47
OUACHITA				
2-4	515,328	+ 8	1,065,305	− 7
6-8	175,601	+ 36	119,413	+ 29
10-12	51,982	+ 43	26,830	− 10
14-18	13,512	+ 29	9,371	− 27
20 and up	1,007	+ 36	1,100	− 34
Total	757,430	+ 16	1,222,019	− 4
OZARK				
2-4	253,556	+ 54	2,068,282	+ 22
6-8	51,875	+ 12	282,648	+ 58
10-12	15,186	+ 50	87,562	+ 31
14-18	2,962	+ 52	28,969	− 4
20 and up	70	+ 21	3,923	− 11
Total	323,649	+ 45	2,471,384	+ 25
SOUTH DELTA				
2-4	34,730	+ 84	557,192	+ 49
6-8	8,835	+ 86	94,041	+ 14
10-12	2,814	+ 37	36,789	+ 7
14-18	1,191	+ 12	19,492	− 5
20 and up	430	+310	5,748	+ 24
Total	48,000	+ 78	713,262	+ 38
NORTH DELTA				
2-4	7,889	+ 40	262,165	− 19
6-8	2,072	+ 33	51,678	− 24
10-12	620	− 60	20,347	− 35
14-18	582	− 48	9,174	− 42
20 and up	192	− 4	2,024	− 32
Total	11,355	+ 12	345,388	− 22

STANDARD TABLES

Tables identical in format to those that follow will be found in all State reports issued by the Forest Survey. Their purpose is to facilitate compilation of data for various States and regions.

Table I. *Land area, by major classes of land, Arkansas, 1959*

Class of land	Area
	Thousand acres
Forest:	
Commercial	20,757.0
Non-commercial:	
Productive-reserved	59.0
Unproductive	...
Total forest	20,816.0
Nonforest [1]	12,800.6
All land	33,616.6

[1] Includes some acreage of water according to Survey standards of area classification but defined by the Bureau of Census as land.

Table II. *Commercial forest land area, by ownership class, Arkansas, 1959*

Ownership class	Area
	Thousand acres
Federally owned or managed:	
National forest	2,385.4
Indian	...
Bureau of Land Management	.6
Other	265.1
Total	2,651.1
State	193.9
County and municipal	10.7
Private:	
Farm	5,948.3
Industrial and other	11,953.0
Total	17,901.3
All ownerships	20,757.0

Table III. *Area of commercial forest land, by major forest types, Arkansas, 1959*

Forest type	Area
	Thousand acres
Loblolly-shortleaf pine	6,485.6
Oak-pine	1,697.1
Cedar	595.1
Oak-hickory	7,524.2
Oak-gum-cypress	3,997.0
Elm-ash-cottonwood	458.0
Total	20,757.0

Table IV. *Net volume of live sawtimber and growing stock on commercial forest land, by stand-size class, Arkansas, 1959*

Stand-size class	Sawtimber	Growing stock
	Million board feet	*Million cubic feet*
Sawtimber stands	32,327.8	7,736.5
Poletimber stands	6,809.5	3,513.4
Seedling and sapling stands	1,834.8	716.5
Nonstocked and other areas not elsewhere classified	205.7	64.8
Total	41,177.8	12,031.2

Table V. *Net volume of live sawtimber and growing stock on commercial forest land, by ownership class, Arkansas, 1959*

Ownership class	Sawtimber	Growing stock
	Million board feet	*Million cubic feet*
Federally owned or managed:		
National forest	5,507.5	1,551.7
Indian	...	...
Bureau of Land Management	1.1	.3
Other	812.8	216.2
Total	6,321.4	1,768.2
State	337.4	107.4
County and municipal	8.7	3.6
Private:		
Farm	6,740.2	2,441.5
Industrial and other	27,770.1	7,710.5
Total	34,510.3	10,152.0
All ownerships	41,177.8	12,031.2

Table VI. *Net volume of live sawtimber and growing stock on commercial forest land, by species, Arkansas, 1959*

Species	Sawtimber	Growing stock
	Million board feet	*Million cubic feet*
Softwoods:		
Shortleaf and loblolly pines	23,320.2	5,215.9
Cypress	920.1	173.5
Other eastern softwoods	43.3	27.7
Total	24,283.6	5,417.1
Hardwoods:		
White oaks (**Quercus alba** and **michauxii**)	1,824.6	761.8
Red oaks (**Q. rubra, falcata var. pagodaefolia,** and **shumardii**)	936.5	330.1
Other white oaks	2,333.8	976.9
Other red oaks	3,265.4	1,317.6
Sugar maple	...	6.4
Soft maples	81.5	46.1
Beech	99.7	32.4
Sweetgum	2,232.6	883.9
Tupelo and blackgum	1,203.7	353.9
Ash	531.3	191.5
Hickory	1,654.4	736.6
Cottonwood	291.8	69.7
Basswood	20.8	9.4
Yellow-poplar	15.8	5.1
Black walnut	75.2	23.1
Other eastern hardwoods	2,327.1	869.6
Total	16,894.2	6,614.1
All species	41,177.8	12,031.2

Table VII. *Net volume of live sawtimber on commercial forest land, by diameter class groups and species, Arkansas, 1959*

Species	Diameter class groups						Total
	10 inches	12 inches	14 inches	16 inches	18 inches	20 inches and up	
	Million board feet						
Southern yellow pines	4,395.2	4,892.9	4,669.9	3,703.3	2,570.5	3,088.4	23,320.2
Other eastern softwoods	72.0	81.9	93.5	87.7	113.9	514.4	963.4
White oaks (**Quercus alba** and **michauxii**)	...	526.4	443.6	339.9	228.0	286.7	1,824.6
Other white oaks	...	501.1	503.2	406.2	319.1	604.2	2,333.8
Red oaks (**Q rubra, falcata var. pagodaefolia, and shumardii**)	...	169.3	188.4	185.6	133.6	259.6	936.5
Other red oaks	...	793.7	733.8	467.9	355.3	914.7	3,265.4
Beech	...	17.7	6.5	19.0	18.7	37.8	99.7
Sweetgum	...	578.6	546.4	389.5	251.5	466.6	2,232.6
Tupelo and blackgum	...	174.0	225.9	263.9	138.0	401.9	1,203.7
Yellow-poplar	...	1.8	...	1.3	7.6	5.1	15.8
Other eastern hardwoods	...	1,027.5	895.7	764.3	739.0	1,555.6	4,982.1

Table VIII. *Net volume of all timber on commercial forest land, by class of material and species group, Arkansas, 1959*

Class of material	Total	Softwoods	Hardwoods
	Million cubic feet		
Growing stock:			
Sawtimber trees:			
Sawlog portion	6,665.5	3,979.5	2,686.0
Upper stem portion	1,569.0	295.7	1,273.3
Total	8,234.5	4,275.2	3,959.3
Poletimber trees	3,796.7	1,141.9	2,654.8
Total growing stock	12,031.2	5,417.1	6,614.1
Other material:			
Sound cull trees	1,335.3	14.8	1,320.5
Rotten cull trees	811.8	17.7	794.1
Hardwood limbs	771.1	...	771.1
Salvable dead trees	7.1	1.9	5.2
Total other material	2,925.3	34.4	2,890.9
Total, all timber	14,956.5	5,451.5	9,505.0

Table IX. *Net annual growth, annual mortality, and annual cut of live sawtimber and growing stock on commercial forest land, by species group, Arkansas, 1958*

Item	Sawtimber			Growing stock		
	All species	Soft-woods	Hard-woods	All species	Soft-woods	Hard-woods
	Million board feet			*Million cubic feet*		
Net annual growth	2,399.7	1,635.6	764.1	637.2	340.1	297.1
Annual mortality	284.4	72.8	211.6	92.3	17.4	74.9
Annual cut						
Timber products	1,281.3	737.1	544.2	306.0	182.8	123.2
Logging residues [1]	106.7	12.4	94.3	71.8	10.4	61.4
Total annual cut [1]	1,388.0	749.5	638.5	377.8	193.2	184.6

[1] Includes 52.5 million board feet and 24.0 million cubic feet from cultural operations.

Table X. *Output of timber products and annual cut of live sawtimber and growing stock, Arkansas, 1958*

Product	Output of timber products					Annual cut of sawtimber			Annual cut of growing stock		
	Volume in standard units		Roundwood volume								
	Standard units	Number	Total	Soft-woods	Hard-woods	Total	Soft-woods	Hard-woods	Total	Soft-woods	Hard-woods
			Thousand cubic feet			*Thousand board feet*			*Thousand cubic feet*		
Sawlogs	M bd. ft. [1]	1,073,166	169,283	109,256	60,027	1,027,609	627,430	400,179	201,692	116,117	85,575
Veneer logs & bolts	M bd. ft. [1]	32,074	4,490	...	4,490	35,442	...	35,442	6,479	...	6,479
Cooperage logs & bolts	M bd. ft. [1]	20,194	2,895	...	2,895	26,011	...	26,011	5,960	...	5,960
Pulpwood	Std. cords [2]	[3] 1,041,463	78,553	67,016	11,537	104,819	79,526	25,293	74,831	63,442	11,389
Fuelwood	Std. cords [2]	[4] 943,922	73,540	2,166	71,374	66,190	2,137	64,053	39,962	1,530	38,432
Piling	M linear feet	2,036	1,232	1,097	135	7,060	6,289	771	1,450	1,292	158
Poles	M pieces	579	5,615	5,615	...	32,168	32,168	...	6,605	6,605	...
Posts	M pieces	15,533	6,344	3,853	2,491	4,784	673	4,111	5,820	3,291	2,529
Hewn ties	M pieces	98	688	28	660	5,234	208	5,026	1,206	38	1,168
Mine timbers	M cu. ft.	75	75	13	62	88	6	82	79	14	65
Handle stock dimension	M cu. ft.	1,572	1,572	...	1,572	13,018	...	13,018	3,671	...	3,671
Chemical wood	M cu. ft.	3,555	3,555	...	3,555	2,279	...	2,279	2,311	...	2,311
Miscellaneous [5]	M cu. ft.	[6] 2,910	2,910	964	1,946	10,810	1,026	9,784	3,736	922	2,814
Total			350,752	190,008	160,744	1,335,512	749,463	[7] 586,049	353,802	193,251	[8] 160,551

[1] International ¼-inch rule.
[2] Rough wood basis.
[3] Not including 21.2 million cubic feet of wood from mill residues used for pulp.
[4] Not including 58.5 million cubic feet of wood from mill residues used for domestic and industrial fuel.
[5] Includes furniture squares, excelsior, and other miscellaneous products.
[6] Not including 3.1 million cubic feet of mill residues used for miscellaneous products.
[7] Not including 52.5 million board feet of wood killed by cultural operations.
[8] Not including 24.0 million cubic feet of wood killed by cultural operations.

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SOUTHERN FOREST EXPERIMENT STATION
New Orleans, Louisiana
Forest Service, U.S. Department of Agriculture
1960

Table 5. *Forest and nonforest land by Survey region, 1959*

Land use	State of Arkansas	Southwest	Ouachita	Ozark	South Delta	North Delta
	Thousand acres					
Forest:						
Commercial	20,757.0	6,959.7	3,552.2	6,995.9	2,041.2	1,208.0
Noncommercial:						
Productive-reserved	59.0	.2	38.1	18.0	1.7	1.0
Unproductive	...	...	...	...	...	...
Total forest	20,816.0	6,959.9	3,590.3	7,013.9	2,042.9	1,209.0
Nonforest [1]	12,800.6	1,901.9	1,177.9	3,588.4	2,647.0	3,485.4
All land	33,616.6	8,861.8	4,768.2	10,602.3	4,689.9	4,694.4

[1] Includes some acreage classifiable as water according to Survey standards of area classification but defined by the Bureau of Census as land.

Table 6. *Commercial forest land by class of ownership, 1959*

Class of ownership	Commercial forest	
	Thousand acres	*Percent*
Private:		
Farm	5,948.3	28.7
Forest industry	4,028.3	19.4
Other	7,924.7	38.1
Total private	17,901.3	86.2
Public:		
National forest	2,385.4	11.5
Other federal	265.7	1.3
State	193.9	.9
County and municipal	10.7	.1
Total public	2,855.7	13.8
All ownerships	20,757.0	100.0